The NATIONAL GEOGRAPHIC MAGAZINE

Vol. XX DECEMBER, 1909 No. 12

CONTENTS

The Route Over Which Moses Led the Children of Israel Out of Egypt. By Franklin E. Hoskins. With 24 Illustrations.

Arabia, the Desert of the Sea. By Archibald Forder. With 20 Illustrations.

A Country Where Going to America is an Industry. By Arthur H. Warner. With 42 Illustrations.

Turbulent Nicaragua. With 12 Illustrations.

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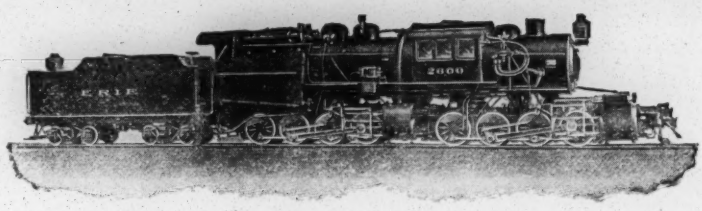

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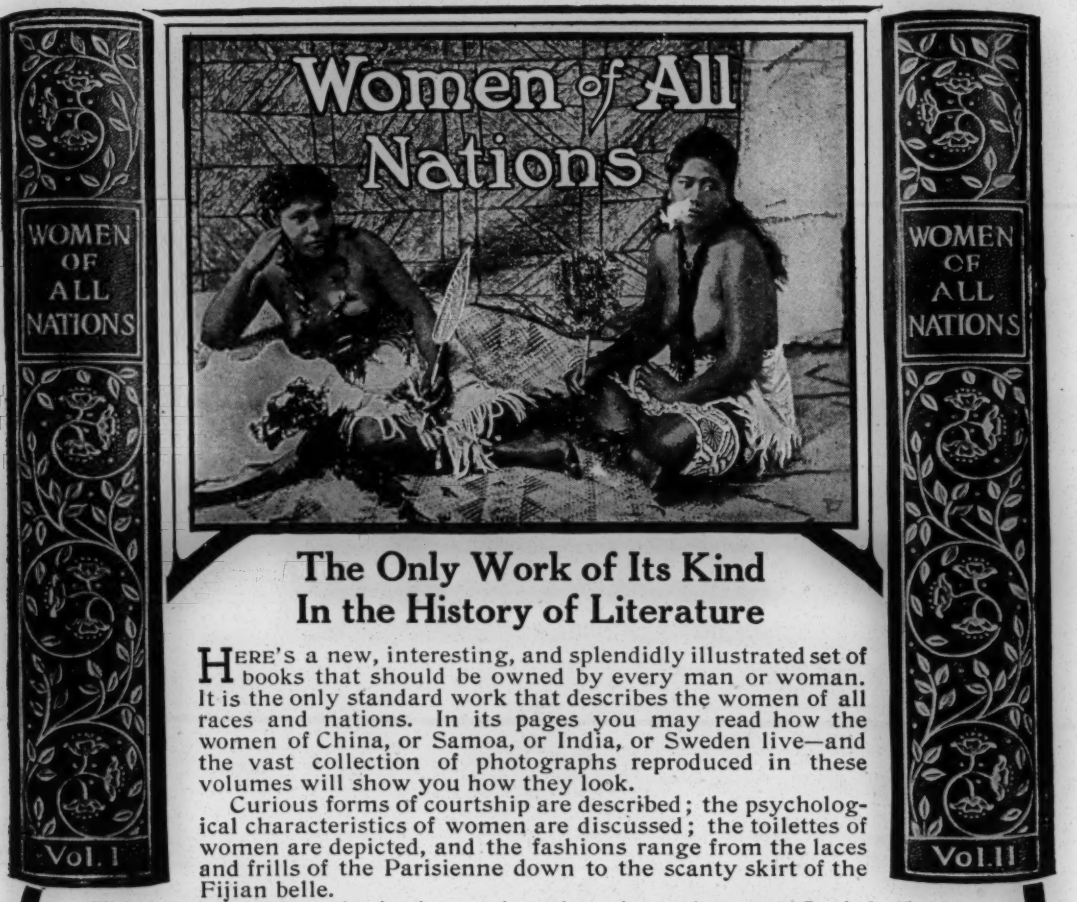

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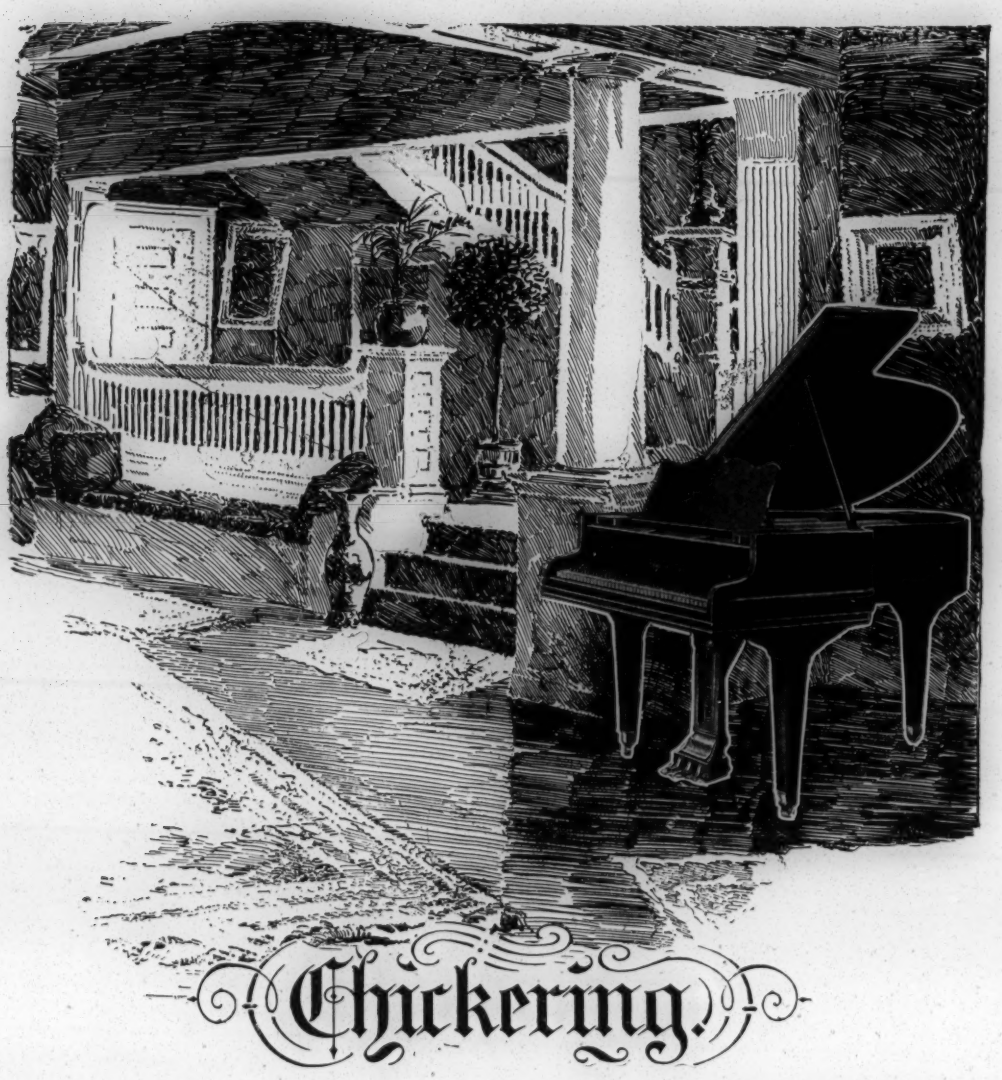

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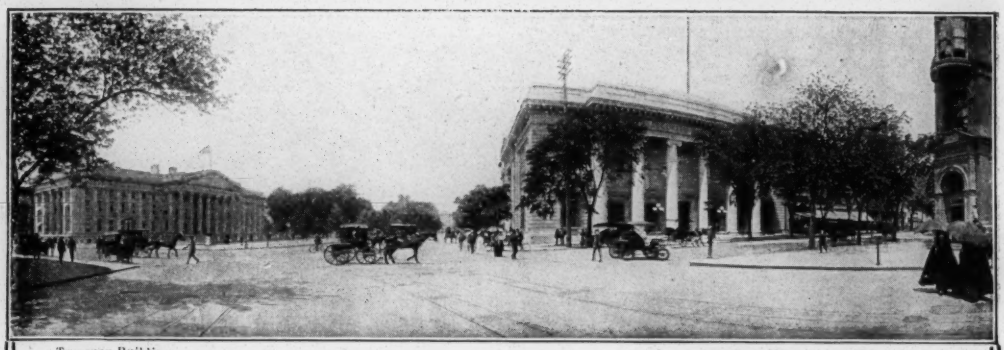

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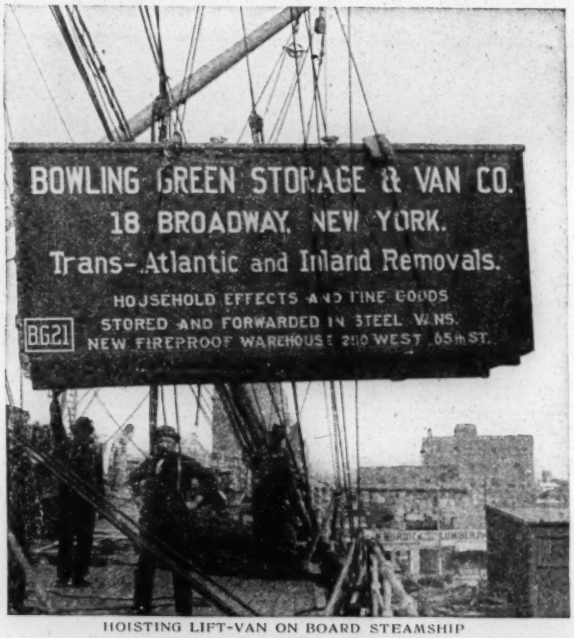
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VOL. XX, NO. 12 WASHINGTON DECEMBER, 1909

THE NATIONAL GEOGRAPHIC MAGAZINE

THE ROUTE OVER WHICH MOSES LED THE CHILDREN OF ISRAEL OUT OF EGYPT

BY FRANKLIN E. HOSKINS, OF BEIRUT, SYRIA

With Photographs by the Author

A FEW years ago a young woman about to visit the Holy Land called on an old lady friend who loved her Bible and read it frequently from beginning to end, and told her that she soon hoped to see Jerusalem, Bethlehem, Galilee, and all the places associated with the life of Christ. The old lady put down her work, removed her silver-rimmed spectacles, and exclaimed: "Well now! I knew all those places were in the Bible, but I never thought of their being on the earth!"

It may therefore interest many of the readers of this Magazine to know that the Desert of the Exodus has an actual existence upon the face of the earth, and that the route of the Exodus is being mapped and studied and photographed by enthusiastic scholars and travelers with results as interesting and as brilliant in their way as attended the modern exploration of the Holy Land and Egypt.

It brings the doings of the Children of Israel in the Pentateuch much closer to modern life when we realize that the route of the Exodus is cut in its first section by the Suez Canal, one of the greatest enterprises on our planet, and that the Mecca Pilgrimage Railway follows that route in its upper stretches from a point near the Red Sea, Zalmoneh, northward for more than 100 miles through Edom and Moab, and again from Rabbath Ammon another 62 miles to Edrei, once the capital of Og, King of Bashan (Numbers 21:33), but now a railroad center where the three lines, from the seacoast at Carmel, from Damascus, and from Mecca meet.

Many will be surprised to learn that a telegraph wire now stretches through the desert from Suez to Tor, a little port just below Mount Sinai; that another wire connects Damascus via Maan with Akaba opposite Ezion-geber on the Red Sea; that a steam launch now navigates the Dead Sea and the Jordan River below Jericho, and that Thomas Cook & Son have added "Sinai and the Desert of the Exodus, Edom, and Moab" to their wall signs and tourist routes.

A DAY FOR EACH YEAR OF THE EXODUS

It has just been the great privilege of the writer, in company with Dr John F. Goucher, of the Woman's College of Baltimore, and Mr S. Earl Taylor, of New York, to follow the route of the Children of Israel from Egypt through the Sinaitic

Peninsula, Mount Seir, Edom and Moab, Amman and the Jabbok, to the Jordan and Jericho. It was a journey of about a thousand miles on camels and horses, and occupied about 40 days—a day for each year of the Exodus. We camped literally within the Old Testament, pitching our tents 32 times between the Nile and the Jordan. It was a physical review of some of the greatest events and characters in human history.

There was a strange thrill in dating letters from "The Jabbok (Gen. 32:22)," where Jacob wrestled with the angel; from "The Nile (Gen. 41:1)," where Joseph first came into contact with Pharaoh; from "Sinai (Exodus 33:11)," where Jehovah spake with Moses face to face, and from "Nebo (Deut. 34:6)," in the land of Moab, where Moses had his only view of the Promised Land, and where "the angels of God upturned the sod for that lonely and unknown grave." While it cannot be insisted too sharply that the Exodus is no imaginary journey, there is a sense in which the old lady was right, for so many of these events and places belong to the geography of the human soul in its exile, its bondage, its wanderings, its glimpses of the Promised Land, and its return to home and heaven at last.

Crossing the Suez arm of the Red Sea and journeying "three days in the wilderness," we spent a quiet Sabbath among "the palms of Elim" and drank from its "springs of water." Another six days' journey carried us along "by the Red Sea," through "the wilderness of sin," past Rephidim to Mount Sinai, on whose sublime summits we spent a part of our second Sabbath. Another five camps carried us down from Sinai past Hazeroth, through the "wilderness of Paran," and well up along the coast of the Gulf of Akaba to Elath and Ezion-geber.

Crossing the great cleft of the Araba south of the Dead Sea, we climbed into the mountains of Edom and from the summit of the traditional Mount Hor had, like Aaron, our first glimpse of the Promised Land. Then followed a series of camps by the Arnon, along the breezy plateaus of Moab, culminating in a never-to-be-forgotten Sabbath on Nebo itself, with its matchless view embracing so much of all succeeding Bible history, not forgetting Greece and Rome and the empires lasting till the present hour.

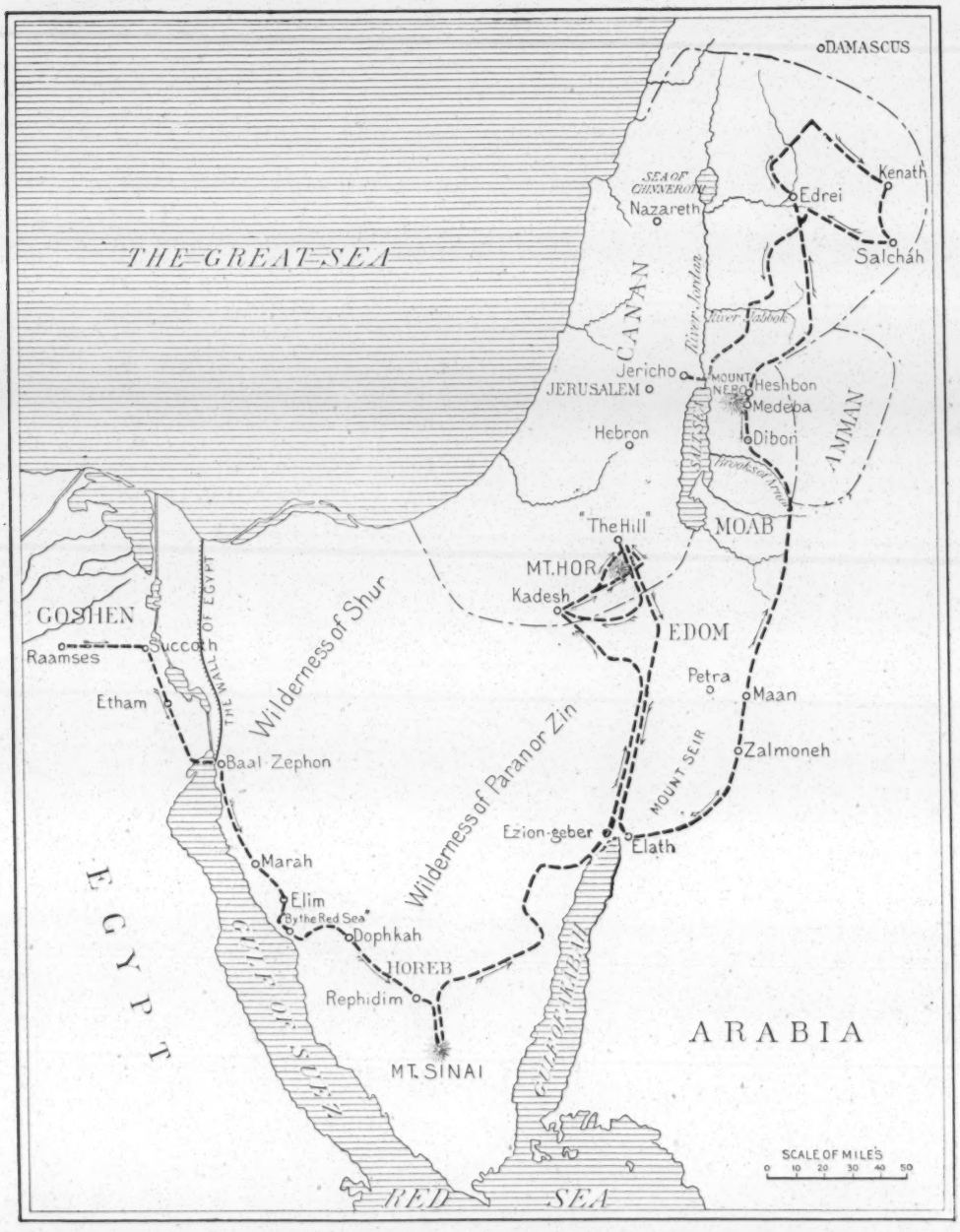
For over against the sky-line, neglecting every other feature in the wide expanse as seen from Nebo, rises the Mount of Olives, where Russia, Austria, Germany, and the other Christian nations of the West are still striving for possession of the Promised Land, while the real owners, the Jews, are scattered over the face of the earth. It is a small and unimportant-looking land upon a map of the world, and yet so great in human history. After Nebo came some lovely camps by the quiet waters of the Jabbok, among the woody glades of Gilead, on the "stormy banks" of the Jordan, which marks the close of the Exodus and the beginning of the conquest of Canaan.

THE PROBLEM OF THE EXODUS

The problem of the Exodus, necessarily difficult in itself, has been complicated by a misreading of the Bible, by the confusion of mental processes and ideas which belong to other lands and centuries, by absolute misconceptions gained through art and song, and by the exaggeration of a number of subsidiary and minor problems which vanish with the first breath of the desert air. Many are apt to think of the Children of Israel as spending 40 years on the road to Canaan, but as a matter of fact "39 of these years were spent in camp and only one year was consumed in covering the entire journey of 1,100 miles between Raamses and the River Jordan."

Others are apt to think of the Exodus as having occurred in such a remote and vaguely indefinite past that we can never know anything accurate of its exact location in time.

While authorities have differed to the extent of 100 or even 200 years, yet it is certain that each fresh examination of the problem in the light of the most recent discoveries brings us closer to the actual dates. There are great difficulties



MAP SHOWING ROUTE OF THE EXODUS. FROM W. S. AUCHINCLOSS

OUR SINAI CAMELEERS: SHEIKH HAMMADI IS THE THIRD MAN FROM THE RIGHT, WEARING A WHITE TURBAN

in settling all dates for events the other side of the Christian era, but the data for Bible dates are superior to all other human records. Scholars have followed up ingenious clues, have made such good use of known astronomical facts and the unbroken sequence of Jewish feasts, that they venture to fix not only the year, but even the month and the day, when the Children of Israel left Raamses in the land of Egypt, and also the date of the crossing of the Jordan and their entrance into the Promised Land.*

Great confusion of thought has gathered round the words "miracle" and "supernatural." As a recent writer† has well said, "Everything we *admire* is literally a *miracle*," and among primitive people of all nations almost anything unusual was taken as "a sign and a wonder." "To most ages of mankind there has been no dividing line between the natural and non-natural; so much is inexplicable to the untrained mind that no trouble was taken to define whether an event would happen in the natural course or not." We modern thinkers have practically abolished the distinction between the "natural" and the "supernatural," but many fail to realize that we have done greater violence to the "natural" than to the "supernatural." We now distinguish sharply between the co-natural and the non-natural and make less use of the "supernatural" because of the confusion of mind occasioned by its mistaken uses.

THE APPEARANCE OF QUAIL, THE STOPPAGE OF THE JORDAN, AND THE WONDERS OF THE EXODUS CONFIRMED BY PRESENT CONDITIONS

"A strong east wind drives the Red Sea back; another wind blows up a flock of quails; cutting a rock brings a water supply to view, and the writers of these accounts record such matters as wondrous benefits of the timely action of natural causes." Modern believers in Divine Providence, and no one can accept either the blind-chance theory of the universe or that we are helpless automata, see incontestable evidence of God's care in the coincidence of these wonderful events with the desperate needs of the Children of Israel. With more light from many sources we shall modify our conceptions of many of these occurrences, but the facts will stand as long as the granite cliffs of Sinai.

The passage of the Suez arm of the Red Sea at the outset, the appearance of the quails, and the crossing of the Jordan forty years later are by no means the greatest difficulties and wonders of the Exodus. Those who have wandered over the sand dunes of the desert, have lost themselves among the shallow lagoons, and have watched the rise and fall of the tides among the inlets about Suez will have little difficulty in conceiving what may have happened in combination with "a strong east wind."

There is good authority for an entire stoppage of the flow of the Jordan by a landslide near Tell ed-Damiek during the 13th century, and those who saw people walk across the brink of Niagara Falls, when the river bed was almost dry by reason of an ice gorge above, will not tarry long on the passage of the Jordan.*

After we left Elim and were approaching the seacoast one of our cameleers suddenly rushed ahead of us some 25 yards and a moment later returned with a live quail in his hands which he had just caught. This event occurring at the very region where the Children of Israel were so abundantly fed by the flocks of quails, wearied by their flight over the Akaba arm of the Red Sea, was a wholly unexpected exemplification of the phenomenon of the Bible. It was the same east wind blowing over the same sheet of water into the maze of valleys that brought us our quail so weary as to be easily caught by the Bedawy of today. There is abundant confirmation from other sources that our experience was by no means unique.

The problem of the rainfall in the Sinaitic Peninsula, which does not seem

* Auchincloss, April 19, 1477, and March 21, 1437, B. C.

† Petrie, Researches in Sinai.

* A. D. 1267. See Palestine Exploration Fund Quarterly, July, 1895, pp. 253-261.

THE ONLY MEANS OF TRANSPORT IN ALL THE PENINSULA: THE SLOWEST IN THE WORLD

to have changed since 5000 B. C., has an all-important bearing upon the population before the days of the Exodus, and a no less important bearing upon the numbers of the Children of Israel who went out at that time. There are many separate lines of argument and research converging upon the commonly accepted figures which must reduce them to but a small portion of the 3,000,000 often spoken of.

THE ARMY OF 600,000 FIGHTING MEN IMPOSSIBLE

The climatic conditions being unaltered, the ancient population must have been about the same as that of today, 5,000 or 6,000 people. If the Children of Israel were about equally matched with their enemies at Rephidim, then there could not have been 600,000 fighting men. The land of Goshen, at the mouth of the Wady Tumilat, included an area of not more than 60 to 80 square miles, and could not have supported more than 20,000 people at the utmost. 600,000 fighting men would imply at least 3,000,000 people, which would equal if not exceed the whole population of the delta, and there is no trace of such a depopulation of this section of Egypt at the date required.

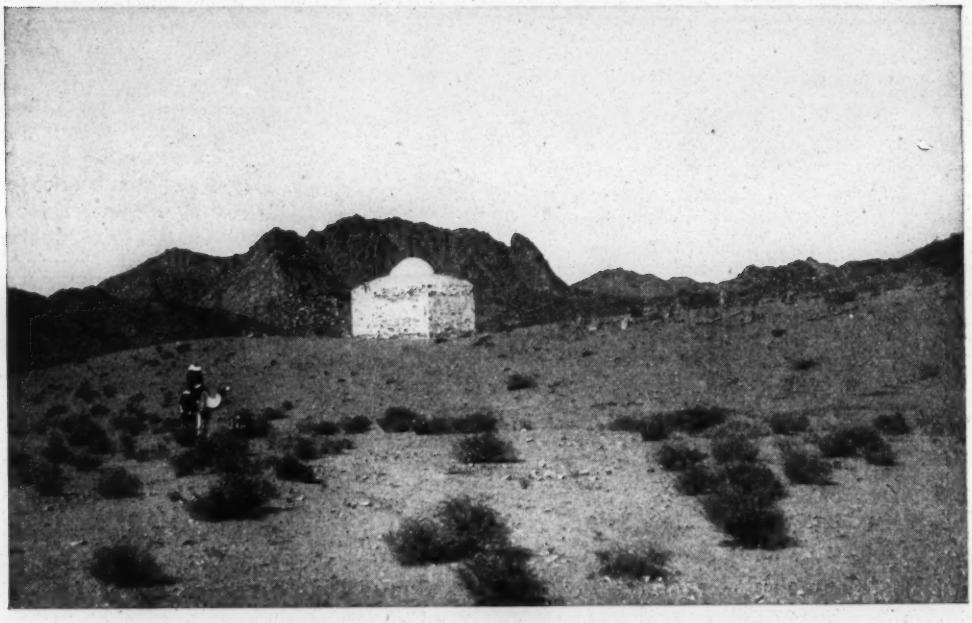
The crux of the figures, however, comes in the two census lists in Numbers I and XXVI. Those who are interested in the most modern solution of this difficulty will find the full statement in Petrie's Researches in Sinai, where the word "thousand" is taken to mean "group" or "family," and the results in figures reveal some startling mathematical facts.

While in Sinai we inquired carefully of the monks concerning the rainfall, and the head of the monastery, who has lived there since 1866, a period of 43 years, told us that not infrequently there were periods of three and four years in which no rain fell. The winter of 1907-08 was one of "much snow," but the total fall did not exceed 20 inches. Up to February 27, 1909, neither rain nor snow had fallen during the winter of 1908-09.

MOSES

The problem of the large numbers is intimately connected with the problem of the documents. Too much has been made of the composite nature of the Pentateuch and wholly erroneous conclusions drawn from fragmentary data. The best Egyptologists now accept Moses as a historical character, and his education in

SOME OF OUR CAMELEERS SETTLED DOWN FOR THE NIGHT: A LITTLE FIRE IN THE CENTER AND THEIR CAMEL FURNITURE BEHIND THEIR BACKS



THE TOMB OF NEBY SALIH, A FEW HOURS' RIDE FROM SINAI

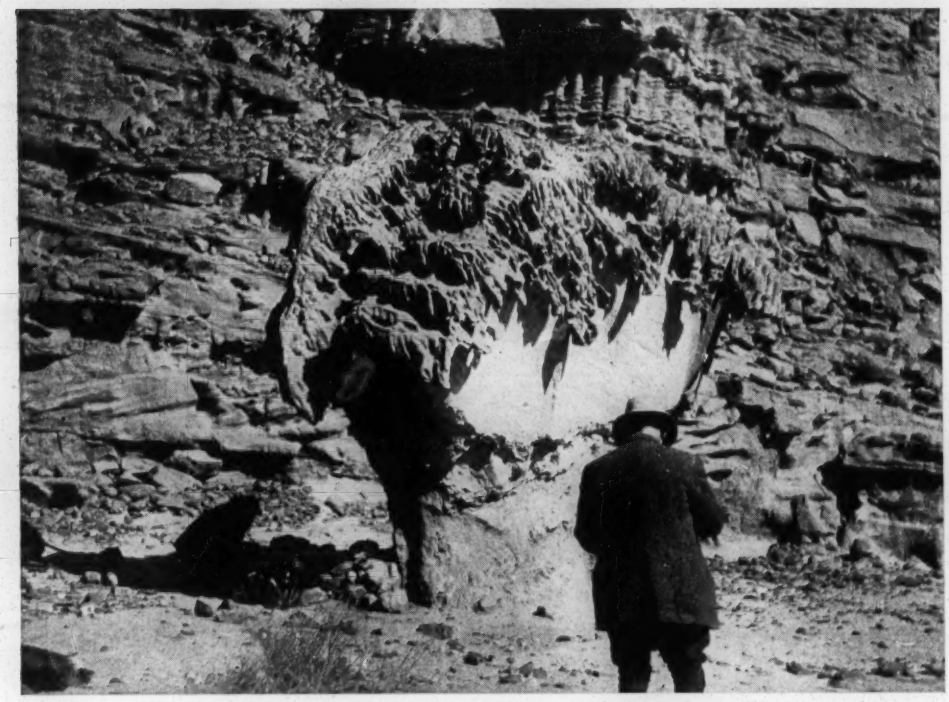
NAGB EL HAWA: SOME NICE RED GRANITE BOULDERS NEARING SINAI

Egypt makes it certain that he and those about him were well accustomed to writing. They also accept the fact that the Israelites sojourned in Egypt, and that an exodus from there to Palestine took place.

The duplications and variations in the text of Genesis and Exodus (once the despair of the literalists) are now seen to be "the strongest proofs that written documents were before the editors of the Pentateuch, and that they were so ancient and revered that no unification was to be tolerated. This fact itself opens the door for a correction of the figures of the Exodus on exactly the same basis as other figures have been modified in the Old Testament text. Those who have examined the oldest manuscripts of the Bible, and have faced the known difficulties of transmission by copyists and translators through a few centuries, will have little difficulty in accepting emendations proposed and forced upon us by incontestable facts from other sources.

The impressions of the writer, after the most careful thought of the problem of the numbers, is this: To lead any number of people through the Peninsula of Sinai under the circumstances of the Exodus was one of the greatest undertakings of human history. To have led 3,000,000, with their flocks and cattle, was a physical impossibility, and would have involved an unbroken series of miracles far beyond the claims of the most ardent supporters of the "miraculous" in the series in which that word has been used and abused. But the writers of the Pentateuch make no such claims as this would certainly involve. The reduction of the numbers, for perfectly justifiable considerations, relieves the situation of its most perplexing elements and brings the whole movement well within historical limits without taking one iota from the divinely ordered plan.

Critics seated thousands of miles away in distance and three thousand years later in time have formulated doubts and queries, have raised imaginary difficulties which vanish into thin air when the observant traveler enters the almost changeless Peninsula of Sinai with the Bible in his hand. Some have gone so far as to



A CURIOUS BIT OF WIND CARVING IN THE DESERT OF SINAI

deny that the inspired writers had the Sinai region in mind at all. Nothing could be more gratuitous and farther from the truth. The Bible writers plainly knew that country as well as George Washington ever knew the country between Boston and Yorktown, and the writer, after 26 years in Bible lands and many journeys into these more remote portions, would record his conviction that the geography of the Bible fits the land as the key fits the lock, and each succeeding generation of men will realize this more clearly.

THE ROUTE OF THE EXODUS

The Bible record is complete as to the route of the Exodus, but many fail to realize this because the history of the journey is scattered through six of the Old Testament books, the record changing back and forth from one place to another nearly 100 times. Mr W. S. Auchincloss, C. E., in his little booklet "To Canaan in One Year" * has made a scholarly and valuable contribution to the problem of the Exodus in assembling and harmonizing all the Bible references and illustrating the route by an itinerary map. In order to bring out the names of the places with greater clearness he has omitted the mountain ranges and gorges, but "in plotting the line of march both their location and the gradients overcome have been carefully taken into account; hence the course shown is topographically correct." This map and accompanying letter-press was one of the most valuable books of reference that we carried with us into the wilderness.

In general it may be said that the first section of the route from Raamses to Sinai is known perfectly and the recovery of most of the ancient names simply a matter of time. The fourth and last section of the route from Elath, on the Gulf of Akaba, to Jericho is also well

* D. Van Nostrand Co., Murray street, New York.

NAGB EL HAWA: THE WINDY DEFILE LEADING INTO THE HEART OF THE SINAI GROUP, ALL OF RED GRANITE

known, and it is of enchanting interest to note that on this section all the most prominent towns mentioned in the books of Exodus and Numbers retain their ancient names till this present hour.* Maan, Dibon, Madeba, Heshbon, Amman, Edrei, Kenath, Salchad and Jericho are all found on our modern maps and are well-known towns to travelers in that region. It is perhaps not too much to say that on the first and last sections nine-tenths of the ancient names will be recovered clinging to the ruins and valleys and mountains of those regions.

The second section of the route, between Sinai and Ezion-geber, is now well known, but because it is an almost uninhabited desert the recovery of the ancient names has not progressed so far. But several of the more important locations have been fixed and we have pleasure in presenting on pages 1034–5 some unique views of Hazeroth and the country about Ezion-geber (Akaba).

* The Jordan Valley and Petra, Libbey & Hoskins. G. P. Putnam Sons, New York, vol. ii, p. 249.

The loop section of the route from Ezion-geber into the Wilderness of the Wandering and back to Elath is the least well-explored portion. It contains the well-known names of Kadesh Barnea and Mount Hor, where Aaron died and was buried. Thirty-eight years of the journey were spent about Kadesh, and it is here, if anywhere, that actual remains of the Exodus will some day be found. The site of Kadesh Barnea has been made the subject of dispute, but it is almost certain that the modern Ain Kadis, with its copious spring, several wells and pools, is really the ancient Kadesh. An equally vigorous dispute still continues concerning the identification of Mount Hor. Mr Auchincloss accepts the Jebel Madura, not far from Kadesh, but tradition as old as Josephus, accepted by Jerome and supported by the unanimous traditions of the Mohammedan and Jewish writers, identify Mount Hor with Jebel Neby Harun, about six miles south of Petra.* This Petra Mount Hor is by far the most imposing mountain (5,900 feet) and the view from its summit embraces more of

the Promised Land than Aaron could have seen from Jebel Madura.*

Out of about 80 place names on or near the route as plotted by Mr Auchincloss, at least 40 are known and identified with all certainty; ten more tentatively located; another ten have been conjectured, leaving only 15 or 20 of minor importance that are practically lost. Ancient names often itinerate with the changing currents of human life about a certain locality so that many of the names now uncertain will be picked up clinging to natural features or obscure ruins. A number of the camping places of the Children of Israel were named from events occurring within the camp and may have left no trace in the wilderness.

THE PENINSULA OF SINAI

The Peninsula of Sinai, within which lies the first two sections of the route, is that triangular region between the two arms of the northern end of the Red Sea. A line drawn from Suez to Akaba, a distance of 150 miles through the desert, forms the northern side of the triangle. The other two sides are bounded by the Gulf of Suez and the Gulf of Akaba. The Gulf of Suez, the longer arm, sweeping toward the southeast for a distance of about 200 miles, lies in the trough-like depression which separates Africa from Asia, and together with the Suez Canal forms one of the greatest waterways of the earth. The other arm, the Gulf of Akaba, extends north by west for 140 miles, being a continuation of the most remarkable rift upon our planet, that of the Dead Sea and the Jordan Valley.†

The area of this triangle, the Peninsula proper, is a little less than 10,000 square miles. It is one vast desert relieved by a few oases along the seacoast and deep among the network of rocky valleys. In the north and along both seacoasts are vast stretches of sand which forever shift before the winds from land and sea. Further inward are stony plateaus and great wastes of sand glistening with salt.

THE HUGE GRANITE RANGE OF SINAI IS ONE OF THE MOST IMPRESSIVE SIGHTS ON EARTH

But just south of the center of the Peninsula, like a great light-house between the continents, rises the huge granite range of Sinai to a height of over 8,500 feet. The triple peaks of Serbal (6,730 feet), Musa (7,363 feet), and Catharine (8,536 feet) all lie within a circle whose diameter is not more than 25 miles. Geologically this mass of primeval gneiss and granite, or "in more precise terminology, of colorless quartz, flesh-colored felspar, green horneblende, and black slate," is one of the most impressive sights of our earth. Since the days of creation these crystalline masses have undergone no geological changes, but have reared their summits above the ocean from the beginnings of time, unaffected by the transitions that have so completely changed the face of our planet elsewhere.

Only at their bases do these venerable mountains show any traces of alteration where the waves and the winds of the ages have crushed and ground their fadeless elements into the colored sands which filled the geological gulfs and bays of the Jordan rift and made possible the beauties of Petra and all that region.* Rising majestically from the encircling setting of desert and sea the whole mass is cleft and rifted and shattered into a fascinating tangle of sublime valleys, towering cliffs, awful precipices, and magnificent peaks which roll like billows far up into the crystalline blue of the heavens.

Long before the days of the Exodus this range was known as Horeb, or the Mountain of God, and into this maze of divine handiwork the Children of Israel were led only forty days or more after they had quitted the bondage of Egypt on the banks of the Nile. Here among these sublime valleys and majestic granite

*The Jordan Valley and Petra, vol. II, p. 231.
† The Jordan Valley and Petra, vol. I, p. 86.

*The Jordan Valley and Petra, vol. II, p. 251.

peaks they remained eleven months while Moses, under God's guidance, transformed the mass of Hebrew slaves into Israel the Chosen People, the miracle of human history.*

THE BEST MORAL AND RELIGIOUS SYSTEMS OF THE WORLD ARE LINKED WITH THE OLDEST GEOLOGICAL FORMATION OF OUR PLANET

Of course these mountain peaks and valleys have been encrusted with legends and shrines, but somewhere here within a little circle of 30 miles took place many of the most important transactions of human history in closest contact with God. The announcement of the Covenant, the manifestation of God's presence, the giving of the Ten Commandments, and the setting up of the Tabernacle are events that loom large in the history and the destiny of the race. Here among the indescribable beauties and grandeur of these granite mountains Moses laid the foundations of a civil code and instituted a complete form of religious worship.

It is no accident that the promulgation of the Divine Law, the fundamental principles of all the best moral and legal systems of the world, are linked with the oldest geological formation of our planet. There is a magnificent correspondence between the granite cliffs of Sinai and the unchangeable walls of moral truths.

THE INHABITANTS OF SINAI

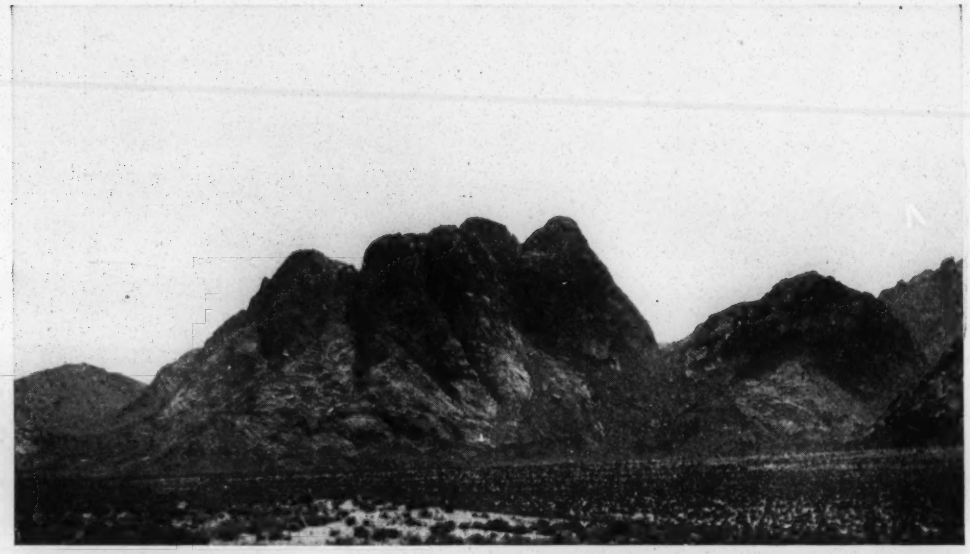
The Peninsula of Sinai is a desert in which its dwindling inhabitants wander in search of food and water. All told the Bedouin do not number more than 600 souls. They are divided into four main tribes; are headed, not ruled over, by sheikhs who represent their followers before the government and who act as judges and referees in the never-ending disputes. These Bedouin dwell in miserable tents which are always pitched in lonely valleys and away from the routes of passers-by. When travelers enter the Peninsula the news is spread by means as mysterious as the wireless, and hungry fellows with their lean camels hasten from every tribe and wrangle for days and even weeks over the right and privilege to share in the transport of the traveler and his outfit.

Our group of 16 was led by Sheikh Hammadi. He was a wide-awake fellow and got about as much work out of such raw material as any one could have expected. Their habits of life, their never-ending and tireless powers of conversation, their dress, their food, their preparations for the night within the circle of their camel harness around a little fire was a fascinating subject of study.

The Peninsula must always have been thinly populated because so scantly supplied with water and means of subsistence. The present population would average only one person to every two square miles (compare Switzerland with 200 to the square mile, New Jersey with 250, and Oklahoma with 10), and they live largely on supplies from Egypt and the proceeds of escorting Greek pilgrims to Sinai. Politically they now belong to Egypt. They are tent dwellers even though they do build rude stone huts at certain of the oases where they gather for a month at the time of the date harvest. It is not too much to say that the only permanent habitations in all the Peninsula are the fortress-monastery at Sinai and its dependency at Tor, on the Red Sea, and these are occupied by Ionian Greek monks.

The route from Suez to Sinai is a nine days' journey on camels. Travelers usually make a short half day to the Wells of Moses, the first oasis four hours beyond Suez. Then follows a waterless tract of three days' journey to Elim, and no one ever making this trip will fail to realize what was meant by the oft-repeated request to Pharaoh that the Children of Israel be allowed to go a "three days' journey into the wilderness" with their wives and children and their cattle to sacrifice. Elim with its wells of water and its palm trees, unchanged to this present day and without human habitation, was the first possible stopping place after the edge of the desert had been crossed.

* Exodus, XIX-XL.



JEBEL SUFSAF, CLAIMED BY MOST SCHOLARS AS THE MOUNTAIN FROM WHICH THE LAW WAS PROCLAIMED TO THE PEOPLE IN THE PLAIN BELOW

This is the mountain that was enveloped in clouds and lightning reverberating with thunder while Moses tarried on its summit and the people waited below

TURQUOISE MINES WORKED 4,500 YEARS AGO

Two days beyond Elim we visited the famous turquoise mines of Meghara, where the Egyptians mined as early as the Fourth Dynasty (2500 B. C.), more than 4,500 years ago, and left a curious collection of rock carvings and tablets which have been of priceless value in their bearing upon Egyptian chronology. It was a wild desert valley in which the poor convicts worked under the lash. The mines at various elevations above the floor of the valley were dug into the mineral-bearing strata sometimes for hundreds of feet. At least two unsuccessful efforts have been made in modern times by foreigners to reopen these mines and some of the Bedouin are still at work digging and searching in a primitive way for the bits of green malachite which they offer for sale in Suez and Cairo.

Two days beyond the mines carried us to the oasis of Firan, rightly designated "The Pearl of Sinai," the most fertile tract and one of the most interesting spots in the whole Peninsula. This will be treated of in a special article at a later date and illustrated with a unique series of photographs.

THE MONASTERY OF ST. CATHERINE

Our camp in the Oasis of Firan was at an elevation of about 2,100 feet, and in the following two days we crossed the watershed beyond Wady Sahab, at an elevation of 3,900 feet, and made a slight descent before our last climb over Nagb el-Hawa (4,900 feet) to the Plain of er-Rahah, which most scholars have regarded as the camping place of the Israelites while waiting for the giving of the Law. The two panoramic views from the upper end and the center of the plain with Jebel Sufsaf, the nearer peak of Jebel Musa or the Mountain of the Law, towering in the center of the picture, are among the most sublime mountain prospects in the world. This is the mountain that was enveloped in clouds and lightning reverberating with thunder, a mountain that could be touched, while Moses tarried on its summit and the peo-

JEBEL SUFSAF: THE MOUNTAIN OF THE LAW

As seen from the Plain of er-Rahah, where the Children of Israel awaited the giving of the Law. The mountain masses on all sides are of red granite, forming one of the most sublime views of the world. The Valley of the Convent of Saint Catharine is exactly in the center of the picture.

CONVENT OF SAINT CATHARINE AT SINAI, WITH THE GARDENS AND MORTUARY CHAPEL TO THE RIGHT

ple waited below. And just to the left of this peak, Jebel Sufsaf, is the valley of the Deir, in which stands the monastery of St. Catharine, the goal of our long journey and one of the most fascinating places in human history.

About the middle of the fourth century when the Byzantine Christians began the exploitation of the holy places the Peninsula of Sinai was peopled by anchorites and coenobites who were bound by a common monastic rule. Traces of their occupation are found in all the mountain valleys dating from the massacres which attended the Saracen invasion. The only spot in the Peninsula which was not submerged in the advancing tide of Islam is the monastery of St. Catharine, which thus becomes an interesting relic of those early Christian centuries.

This picturesque monastery standing in a sublime valley of the Sinai group occupies the site of a fort built by the Emperor Justinian in 527 A. D. It is a hoary pile of old buildings, entirely enclosed by a high wall, on one side of which toward the mountain a few old rusty cannon still do sentinel duty. A lower wall encloses the adjoining delightful gardens which have been wrung by incessant toil from the rocky mountain side below. The fortress-monastery has witnessed many a thrilling event in history, has withstood many an attack and siege, and bears the marks inside and out of its stormy history.

The present entrance for all purposes, after the traveler has been admitted to an outer courtyard, is a low door with two sharp turns within the passageway and capable of being barricaded successfully against the most determined invader. At the first sign of danger this door is still closed and partially walled up, and then the only means of entrance and exit is the windlass, 2½-inch rope, and the basket which is let down from a portcullis on the high wall towards the north. This primitive elevator is in good working order and is a grim reminder of the strenuous conditions of life through all the passing centuries.

ITS FAMOUS LIBRARY

The monastery is now a pilgrim shrine of the Greek orthodox church and under the protection of Russia is safe from molestation. Out of its now famous library came the *Codex Sinaiticus,* easily the most precious of all the Bible manuscripts in existence. It was discovered by Tischendorf, a German scholar in 1844, and dates from the fourth century. Alexander II, of Russia, succeeded in purchasing this priceless manuscript and it was carried to St. Petersburg in 1869.

The kindly monks, now about 30 in number, are all Ionian Greeks and live under a very severe monastic rule. The accommodations of the monastery are sorely taxed by the bands of Russian pilgrims, sometimes 100 in number, which come from Suez once or twice a year.

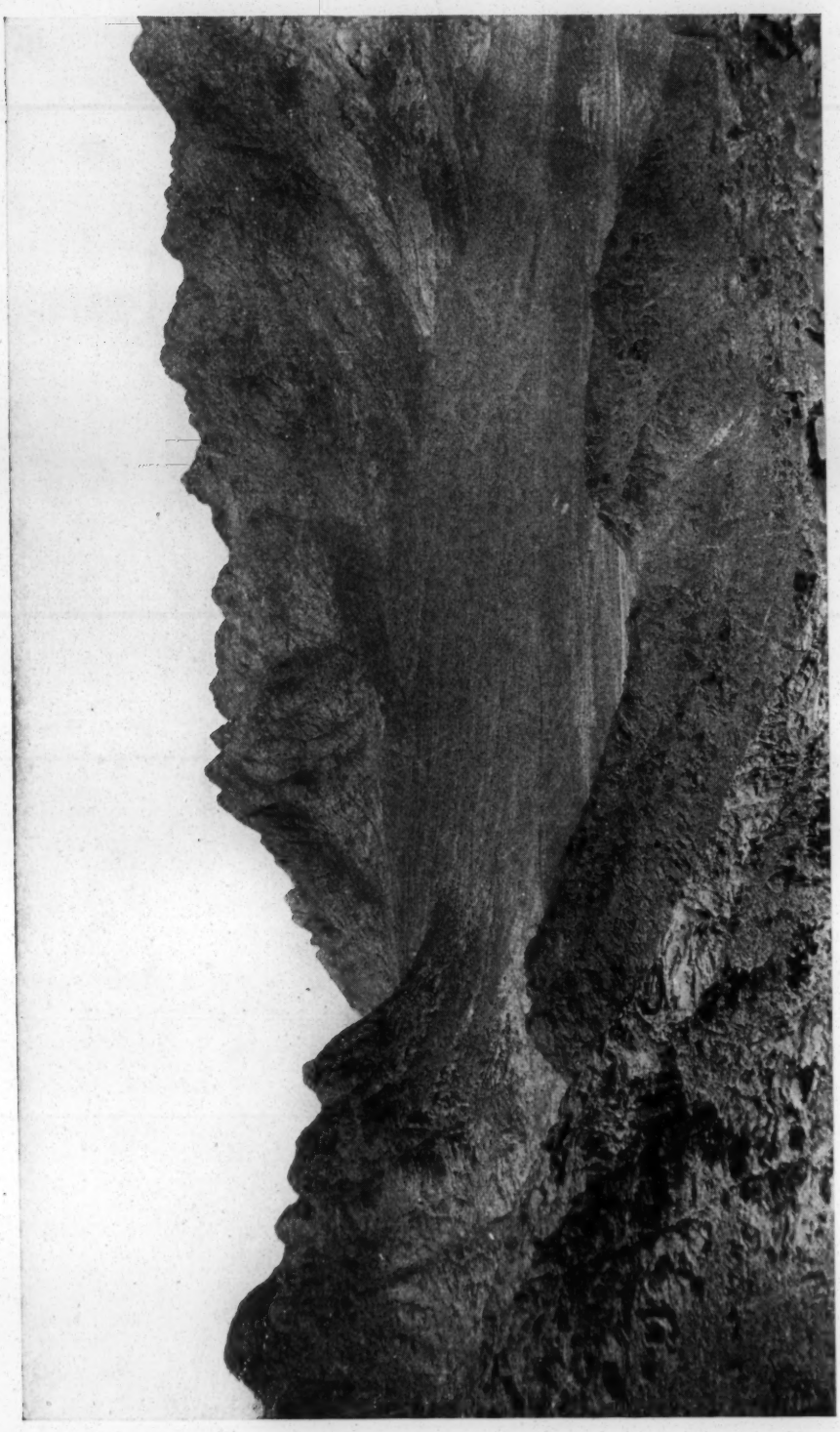
The main church is an early Christian basilica containing a wealth of detail and symbolism of intense interest to the archæologist. The oldest part of the structure is undoubtedly "The Chapel of the Burning Bush," said to mark the spot where God appeared to Moses. All visitors are obliged to remove their shoes before entering. The dim light scarcely reveals the wealth of porcelain, chased silver, fresco, and handsomely wrought lamps.

A ray of the sun is said to enter this sanctuary once a year only, gaining admission through a cleft in the mountain ridge on the opposite side of the valley. With a fine sentimentality the monks have erected a large cross on the mountain ridge, so that the shadow of the cross must touch this site of the Burning Bush once a year, and the ridge is called The Mountain of the Cross.

Behind the church is the well from which Moses is said to have watered the flocks of Jethro, and where he met his future wife.

THE MOUNTAIN OF THE LAW

But the great shrine is the ascent of Jebel Musa, the Mountain of the Law, which rises 2,350 feet above and behind



THE PLAIN OF ER-RAHAH, SEEN FROM THE MOUNTAIN ABOVE, WHERE THE CHILDREN OF ISRAEL WAITED FOR THE PROMULGATION OF THE LAW

the monastery. The pilgrimage steps, said to be 3,000 in number, are broken at many points, but still form an impressive ascent to the noble mountain top. There is a shrine to the Virgin Mary and a chapel to the Prophet Elijah on the way up. At one narrow passage still exists a gateway where pilgrims formerly made final confession before being allowed to tread the way to the summit sacred to Moses, and made forever holy by the giving of the law.

The view from the top is wild and imposing beyond the power of any pencil or camera. The other peaks of this Sinai group cut the heavens in every direction, a tangle of smaller mountains and valleys lie almost at one's feet, while far beyond in clear weather a bit of the Red Sea and the greater part of the Gulf of Akaba are visible. On the way down a detour can be made to the traditional cleft connected with the giving of the law, through which we get a splendid view of the Plain of er-Rahah, where all the Children of Israel could have stood within full view of the peak Ras Sufsaf and have heard, from its lower slopes, the human voice of the Law-giver cutting through that wondrous desert air.

Beyond Sinai the route of the Exodus, within the Peninsula, is fixed beyond a peradventure by the configuration of the valleys, the one or two well-known locations and the water supply. We left the monastery by the Wady esh-Sheikh which we followed as far as the tomb of Neby Salih, accounted by the Bedouin as one of the most sacred spots in the Peninsula. Palmer attempts to identify this Bedouin saint with Moses himself, and there are many considerations which bring this within the realm of possibility.

Turning out of Wady esh-Sheikh through a side valley we soon reached a divide beyond which the country changed instantly.

A wide plateau showed signs of vegetation, where grazed hundreds of camels and thousands of sheep, lambs, and she asses. The whole skyline took on a softer, smoother look, and the sides and bases of the mountains lost the sharp, forbidding aspect of Sinai. We had passed suddenly from the granite into the limestone formation, and a day later we had dropped from 5,100 feet, at Sinai, through the Wady Saal, to 2,600 feet, at Wady Shukaa, and pitched our tents among the beautifully colored sandstone cliffs. From its elevation it is plain that these sandstone strata on the west side of the continuation of the Arabah are of the same age and origin as those which form the glory of Petra.* Here we made one of our most fascinating desert camps beside a huge mass of crumbling sandstone, and realized what "the shadow of a rock in a weary land" must mean in the scorching heat of summer.

HAZEROTH, WHERE MIRIAM, SISTER OF MOSES, WAS STRICKEN WITH LEPROSY

Three hours beyond this camp we had one of the most thrilling experiences of our journey. After a tiresome stretch over sandy plains and winding among weird sandstone cliffs and crags, we rode up a long slope towards a break in the limestone hills and suddenly looked down into one of the most beautiful and romantic nooks of the Peninsula.

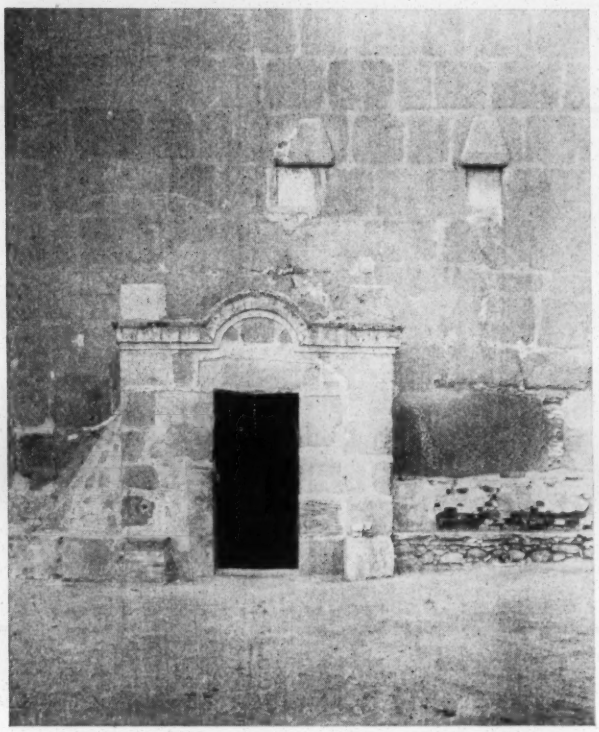
It was the oasis of Ain Hudherah, the Hazeroth of the Exodus (Num. 11:35-12:16) where Miriam and Aaron spoke against Moses because he had married a Cushite woman. Here Miriam was stricken with leprosy and "shut up without the camp for seven days and the Children of Israel journeyed not till Miriam was brought in again." The panorama on page 1034 is taken from the top of the gorge about half a mile away from the little oasis and at least 300 feet above. It took us fully half an hour winding back and forth among the deep sandstone ravines before we emerged on the yellow and white sands and entered the oasis through a beautiful natural gateway.

The other panorama on page 1035 gives some idea of the plaza-like cavity among the rocks, with the cliff rising several hundred feet on three sides of the parallelogram, which was 300 feet along one end, 1,000 feet along the side, and 400

*The Jordan Valley and Petra, vol. ii, p. 117.

THE MONASTERY OF SAINT CATHARINE AT SINAI, IN THE VALLEY OF THE DEIR, DATING BACK TO 527 A. D.

Jebel Musa, the Mountain of the Law, is the great granite mass to the left and the stairway of 3,000 steps to the summit climbs one of the ravines at the extreme left of the picture



THE ONLY ENTRANCE TO THE MONASTERY OF SAINT CATHARINE, SINAI
The door is five feet high

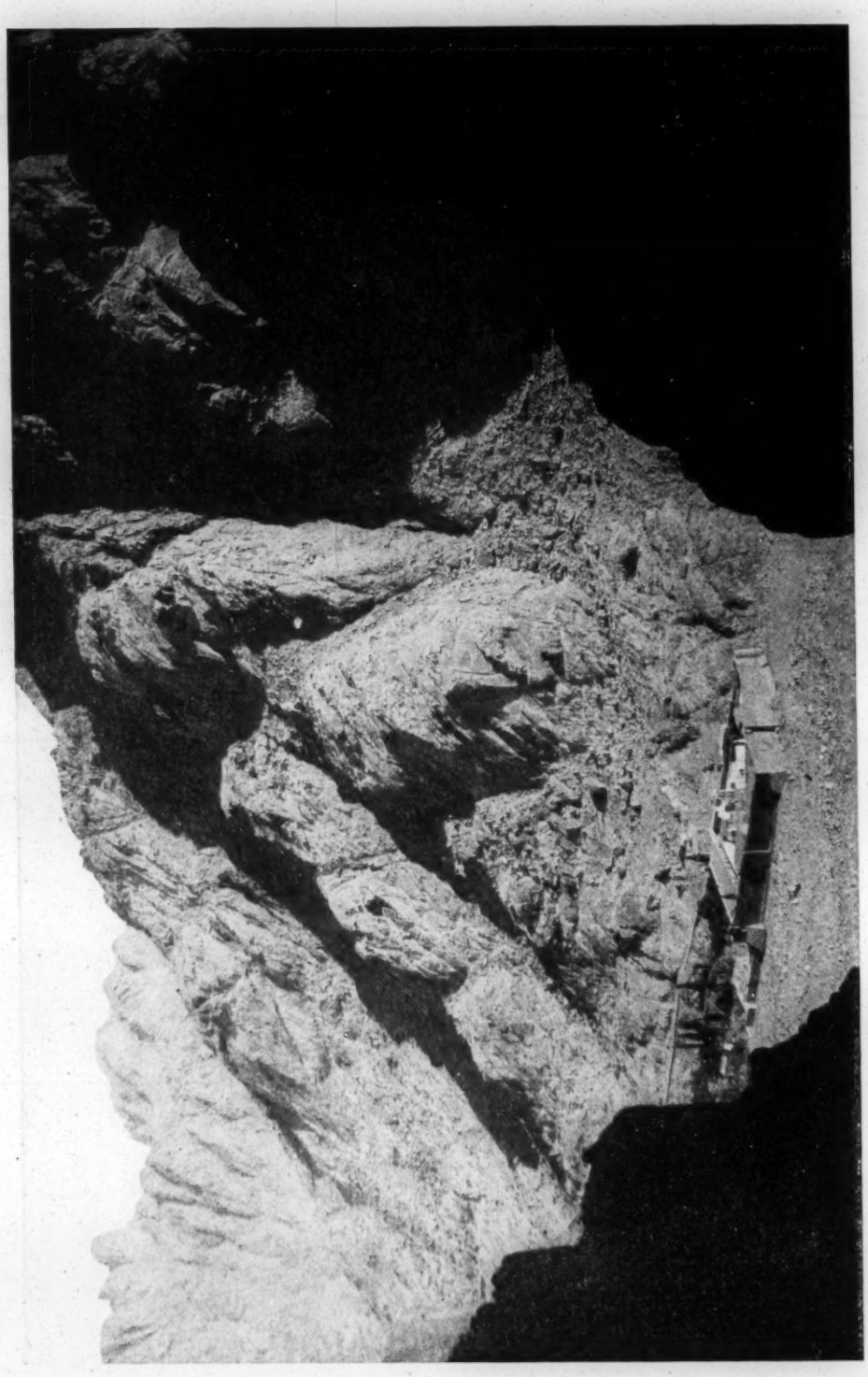
feet along the other end. It also shows the double group of palm trees, perhaps, which get their life from the fountain which eternally fights its way up through the drifting white sands. The main stream of the fountain comes from a small tunnel, at the inner end of which is a cleft in the apparently solid rock.

Outside the cutting for some 30 feet, is a deep, open cutting for some 30 feet, and then begins the gardens where a deaf and dumb Bedouin watched the few spots sown with wheat, turning the stream from place to place until it was lost in the drifts of pure white sand. Because of the two groups of palms it would almost seem that there was a double fountain, or some sort of a tunnel which carried the precious water across the strip of sand that lies between the two groups.

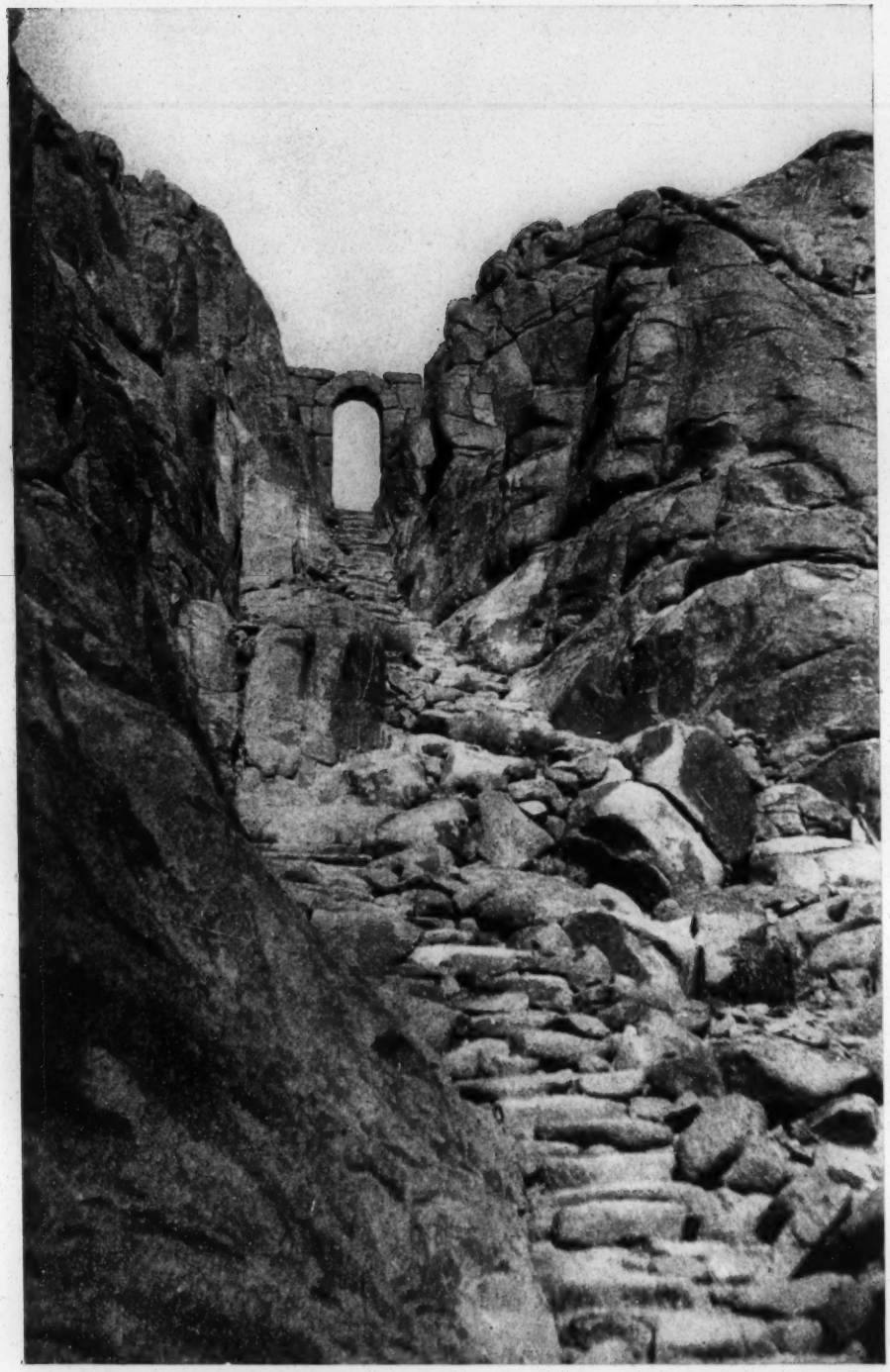
The weary traveler coming upon this delightful nook from any point of the compass will never forget the sight of this wonderful little oasis. At least four possible roads converge here. The one we followed from Sinai and the one we took northward to Akaba, and two others up into the desert plateau above, one of which leads straight to Suez and the other to Gaza on the borders of Palestine.

Between Hazeroth and Ezion-geber lie the still unsolved portions of the problem and route of the Exodus. After reaching the shore of the Red Sea, they turned northward, and for 38 years roamed about the neighborhood of Kadesh. Into this Wilderness of the Wandering, explorers are now penetrating from the north, the west, and the south, and a few years hence we shall have as good maps and details of it as we have of the other sections of the route.

Our plan carried us down from Haze-



THE MONASTERY OF SAINT CATHARINE, SINAI, SEEN FROM A POINT ON THE STAIRWAY LEADING UP TO THE MOUNTAIN OF THE LAW



GATEWAY ON THE STAIRWAY TO THE TOP OF THE MOUNTAIN OF THE LAW

THE ROCKY ROAD WINDING DOWN INTO HAZEROTH

ENTRANCE TO THE OASIS OF HAZEROTH

A BEAUTIFUL FOUNTAIN IN EDOM, WITH BEDOUIN WOMEN FILLING WATER SKINS

roth through a series of sublime valleys to the shore of the Gulf of Akaba, at Nuweiba, where we met another surprise in the shape of an Egyptian fort built about 16 years ago, when the boundary question between Egypt and Turkey was causing friction. It stands in an oasis of palm trees which fringe the shore of a beautiful little bay. The building is about 200 feet square and a well of good, but brackish water in the courtyard. Five years ago it contained some 200 soldiers of the Egyptian army, but after the settlement of the boundary in 1906, it was left in the charge of two forlorn guards, who hoist the Egyptian flag daily and waylay passers-by for tobacco and with messages to their families in Akaba.

Two days' ride along the shell-strewn shore carried us to the boundaries of Egypt as fixed in 1906, after the sharp encounter between Great Britain and Turkey, when Great Britain put her fleets in motion and notified Turkey that if the Turkish troops then within the disputed territory were not removed at a certain date there would be war. After the withdrawal by Turkey a commission fixed the boundary by erecting a line of stone and steel pillars from below Akaba on the gulf across the desert to the Mediterranean Sea at el-Arish. The first of these pillars stands on a high bluff, 100 feet above the sea, beyond the little fortress-crowned Island of Pharaoh, and is visible for many miles overland and far out at sea. It is a mute but impressive token of the power which, from its island home, controls so much of the blue waves and the winding shores of the habitable earth. Beyond this line of pillars we entered the Turkish Empire and an hour later struck the Egyptian caravan route which takes the straight course across the Peninsula from Suez to the Abaka arm of the Red Sea.

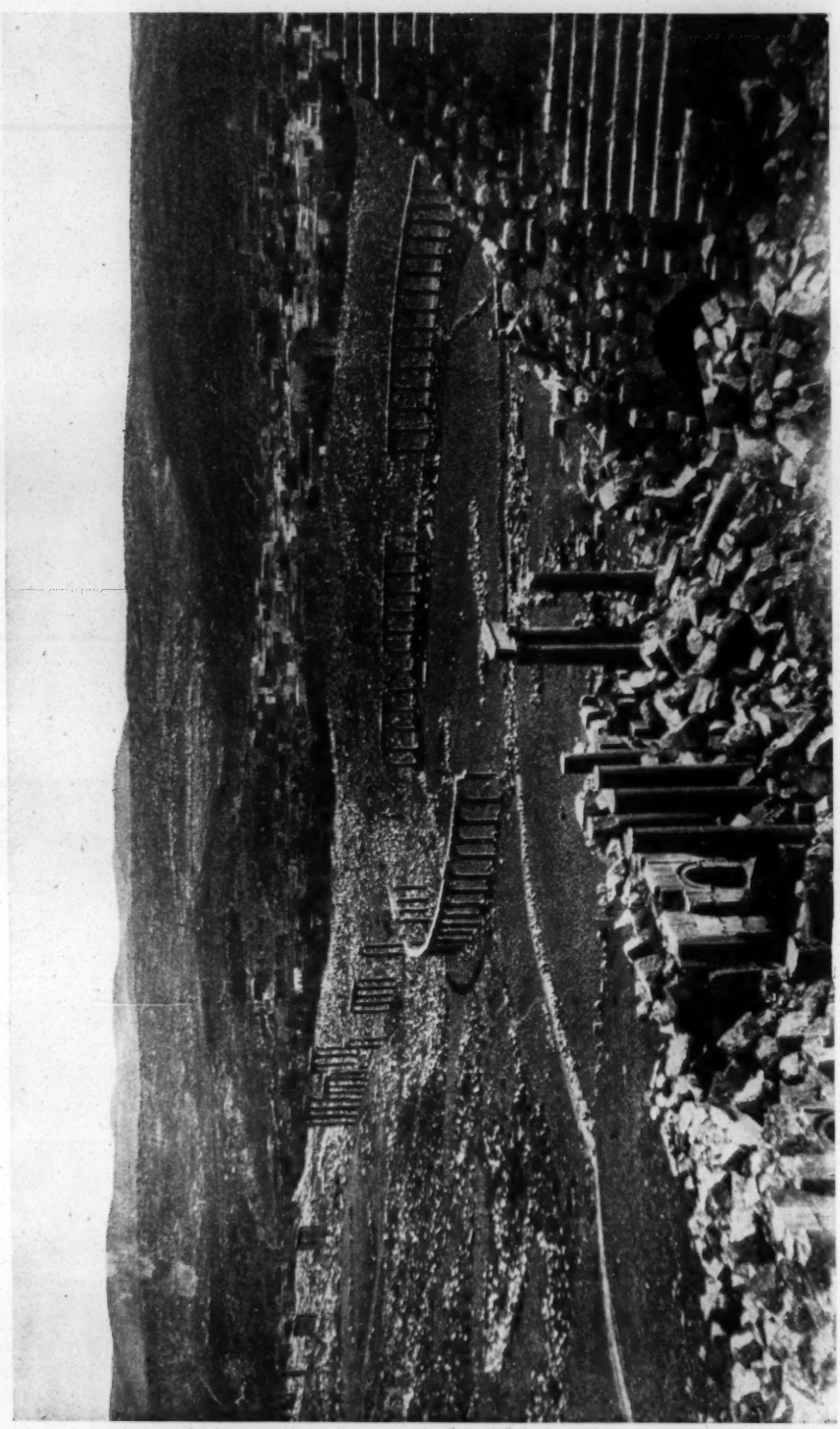
EGYPT IS LEFT BEHIND

For two days and more we had been looking over the water from Africa into Asia, and now we were approaching another turning point in our pilgrimage. Nothing could have been more beautiful than the sunlight playing over those quiet waters and upon the barren mountains beyond, into which as yet no Christian travelers have ever been allowed to go except by stealth. We swung round the

OASIS OF HAZEROTH, SEEN FROM THE PASS ABOVE AND ABOUT A MILE AWAY

The oasis is the black spot exactly in the center of the picture

HAZEROTH, A BEAUTIFUL OASIS WHERE THE CHILDREN OF ISRAEL TARRIED SEVEN DAYS, WHEN MARIAM, THE SISTER OF MOSES, WAS SMITTEN WITH LEPROSY



JERASH: A CITY OF THE DECAPOLIS, ON THE HEADWATERS OF THE JABBOK

A NARROW BIT ALONG THE SEASHORE OF THE GULF OF AKABA

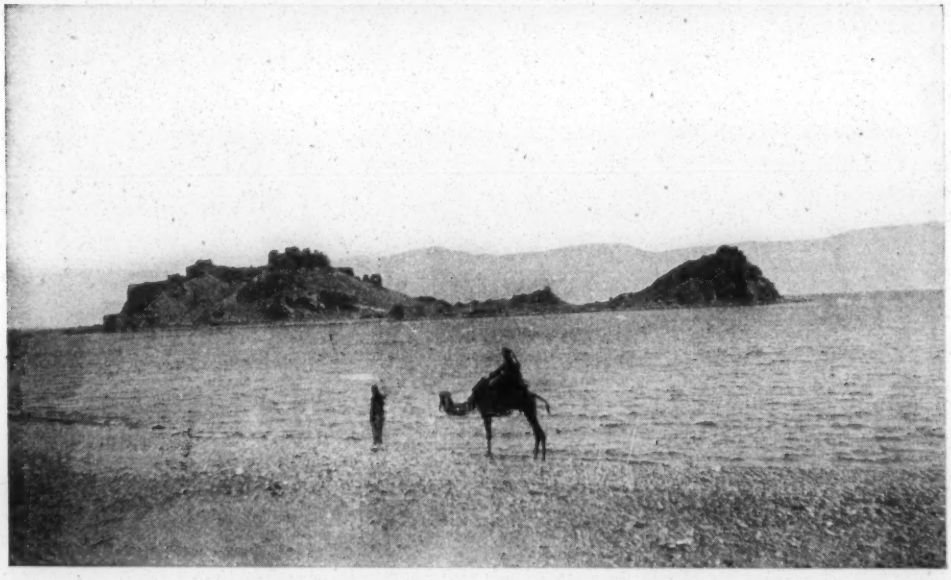
SOME CALLERS AT OUR CAMP IN THE LAND OF EDOM

head of the Gulf and across the utmost extremity of the Jordan Valley rift and entered the town of Akaba. It is a beautiful spot—seen from a distance—because of its oasis-like clusters of palm trees and the shimmering seat at their base.

But the town itself inside is wretchedness and filth personified. Rain seldom falls here and the dirty inhabitants drink from brackish and almost putrid wells. The old castle or caravansary is half in ruins and the other houses are mouldering mud heaps. If one heavy rain ever came these houses would crumble into complete ruin in a few hours. The people are despicably poor in their persons and characteristics, having lived like leeches on the Egyptian caravans to Mecca for centuries.

For us, however, the town was a memorable camping place. It marked the successful close of our journey across the Peninsula. The commander of the Turkish troops handed us telegrams that brought us into contact with the modern world again. Only fifteen minutes before our caravan of 22 slowly moving camels came around the seashore and into the shadow of the palm trees another caravan of 18 horses and mules, led by two fine soldiers from Beersheba and riding swift camels, dropped their burdens at the same spot. They had made a journey of 19 days down from Beirut, via Sidon, Tyre and Jaffa, to Beersheba, and then across the wilderness to meet us at Akaba. They brought us a fresh supply of provisions and charcoal, and two boxes of oranges from the groves at Jaffa and, best of all, letters from home. There was great joy in the camp that night.

The next day we dismissed the cameleers and started them back to their desert tents about Sinai, while we took up the more familiar journey over the fourth section of the route of the Exodus. A guard of twelve horsemen, seven foot-soldiers, and our two soldier cameleers from Beersheba, accompanied us over the rough and almost waterless valleys to Maan and Petra. We pitched our tents in Edom, Moab, and the Land of Gilead, at the Arnon, at the Jabbok, and then at the Jordan. Our last climb was up the slopes of Judea, and when we entered the earthly Jerusalem, the city of David, the city of its Greater King, it seemed as though we had lived through all ancient history, so freighted were our memories with the events and scenes of the desert and the Exodus.



PHARAOH'S ISLAND AND RUINED CASTLE

ARABIA, THE DESERT OF THE SEA

By Archibald Forder, of Jerusalem

With Photographs by the Author

THE great peninsula known in these days as Arabia is one of the oldest known parts of the earth. Long before the sons of Jacob went down into Egypt, the sons of Ishmael had settled in the land Providence had assigned them. The boundaries of Arabia are outlined as early in the Bible as Genesis xxv. 18. Probably many centuries ago Palestine, Syria, and the Sinaitic Peninsula were important parts of Arabia. Isaiah speaks of it as the "desert of the sea" (xxi. 1), and when one considers it a land largely desert, almost entirely surrounded by water, we conclude that the ancient seer was not far wrong in his designation of the land. Arabia is between Egypt and Persia, to put it widely, also between India and Europe. It has a seacoast of about four thousand miles.

No land so little attracts the attention of the speculator, hunter, adventurer, or traveler as Arabia, and yet no country presents so large or new a field as the subject of these lines.

Many are the obstacles to be faced and overcome ere one can see and learn for oneself what is beyond the mysterious and almost waterless belt of uninviting desert that encircles this little known land, but a few have penetrated the country from different points and each has shed some light on the interior.

The first and perhaps the most difficult obstacle to contend with is the rigid persistence of the Turk, who practically controls the entire coastline of Arabia, but who holds little sway inland. Those landing on the coast with the intention of proceeding to the interior are met by smiling officials, who politely request your permission from Constantinople to proceed inland, and, on failing to produce that, you are recommended to procure the same by telegraphing to your representative in the metropolis of the empire—a costly and usually hopeless procedure.

If, however, an entrance is gained, as has been done, troubles of other kinds have to be overcome, such as the difficulties of transportation, the superstition of the natives and their dislike of the Christian, the latter perhaps the most dangerous if not the most formidable.

Arabia is probably one of the oldest of Oriental countries and at different times has played important rôles in the making of the world's history, and the probability is that in the revival of the Orient it will yet figure prominently once more.

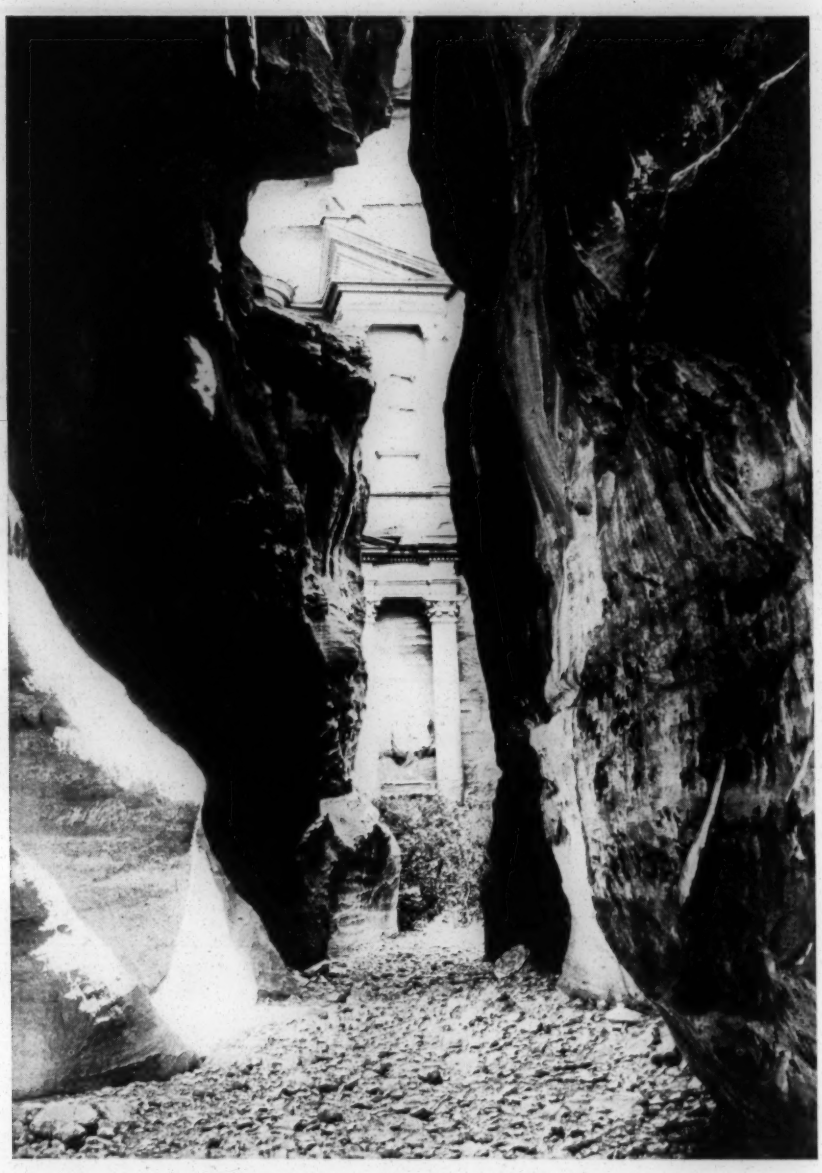
As a whole, the country is about as large as the United States east of the Mississippi River, and has an area of some million square miles.

The northwest part of Arabia is famous for its many-hued mountains, rocks, and crags, into and out of which has been hewn many a fine tomb, temple, dwelling, and theater by the Nabathean, Roman, Greek, or Egyptian, all of whom have left their mark behind them.

Petra, as it is called today, is comparatively easy of access, either by rail from Maan, on the Mecca Railway, or on horseback from Jerusalem via Moab and Edom. For their own protection the Turkish authorities insist on the traveler having a military escort, which is furnished at a nominal sum. This insures freedom from annoyance from the lawless and wild Bedouin that are located in that section. This interesting portion of Arabia has been previously described in this Magazine,* so it is not necessary to again cover the ground.

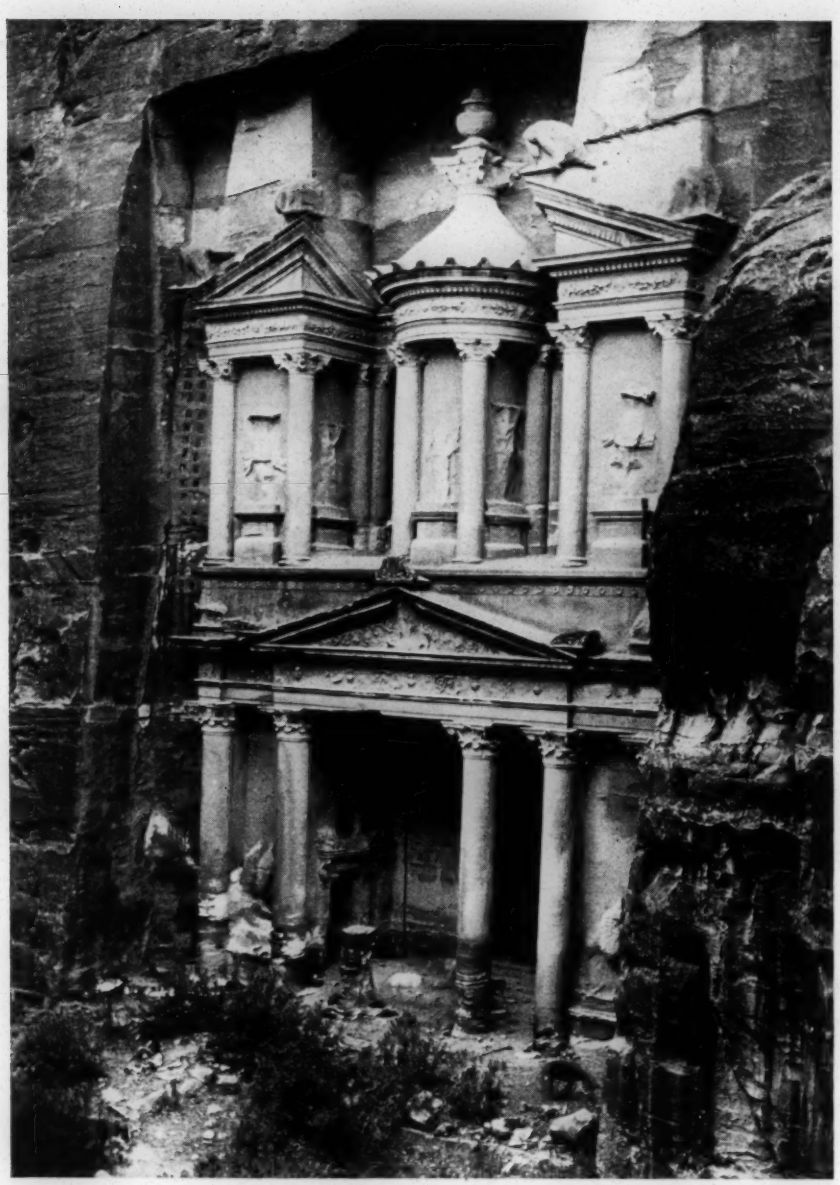
Steering east from Petra one can soon

* Rock City of Petra. Franklin E. Hoskins. Nat. Geog. Mag., May, 1907.



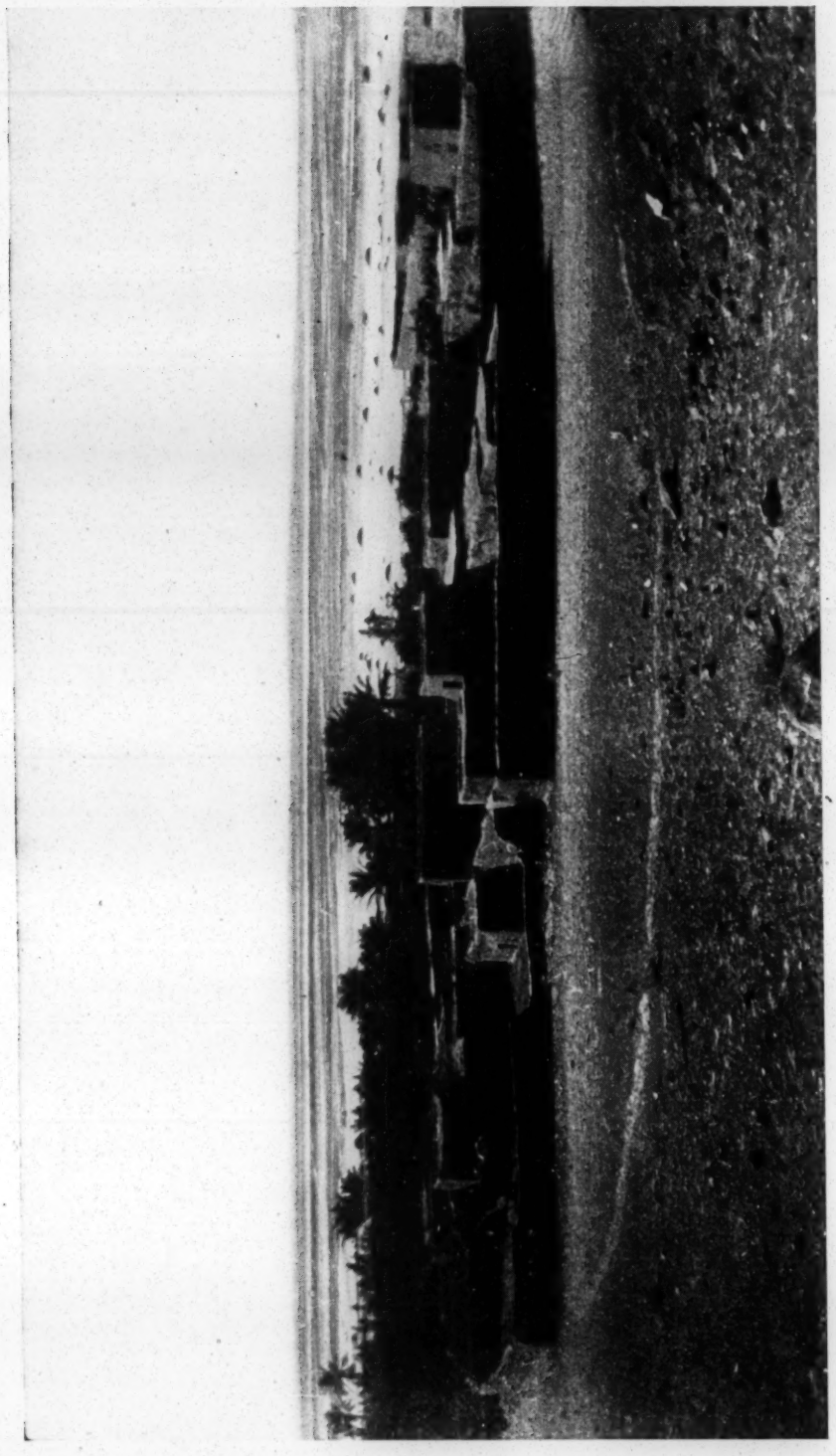
THE ROCKY DEFILE, OR THE SIK, WHICH WAS THE ENTRANCE TO PETRA

This wonderful rock-hewn city is located in North Arabia. Access to it is through a gorge about a mile long which was once paved and spanned by several arches. The illustration shows the western outlet of this fascinating ravine.



PHARAOH'S TREASURY: PETRA

This magnificent piece of work, cut like a cameo out of the rock, is an example of the temples and tombs to be found in North Arabia. The excavation is about 87 feet high and 40 feet wide, and has three inner chambers of large dimensions.



THE OASIS OF KAF

Situated in the midst of the North Arabian desert, and governed by the Arabian Prince Ibn-Rasheed. Few Europeans ever reach this out-of-the-way place

COLLECTING SALT OFF THE DESERT

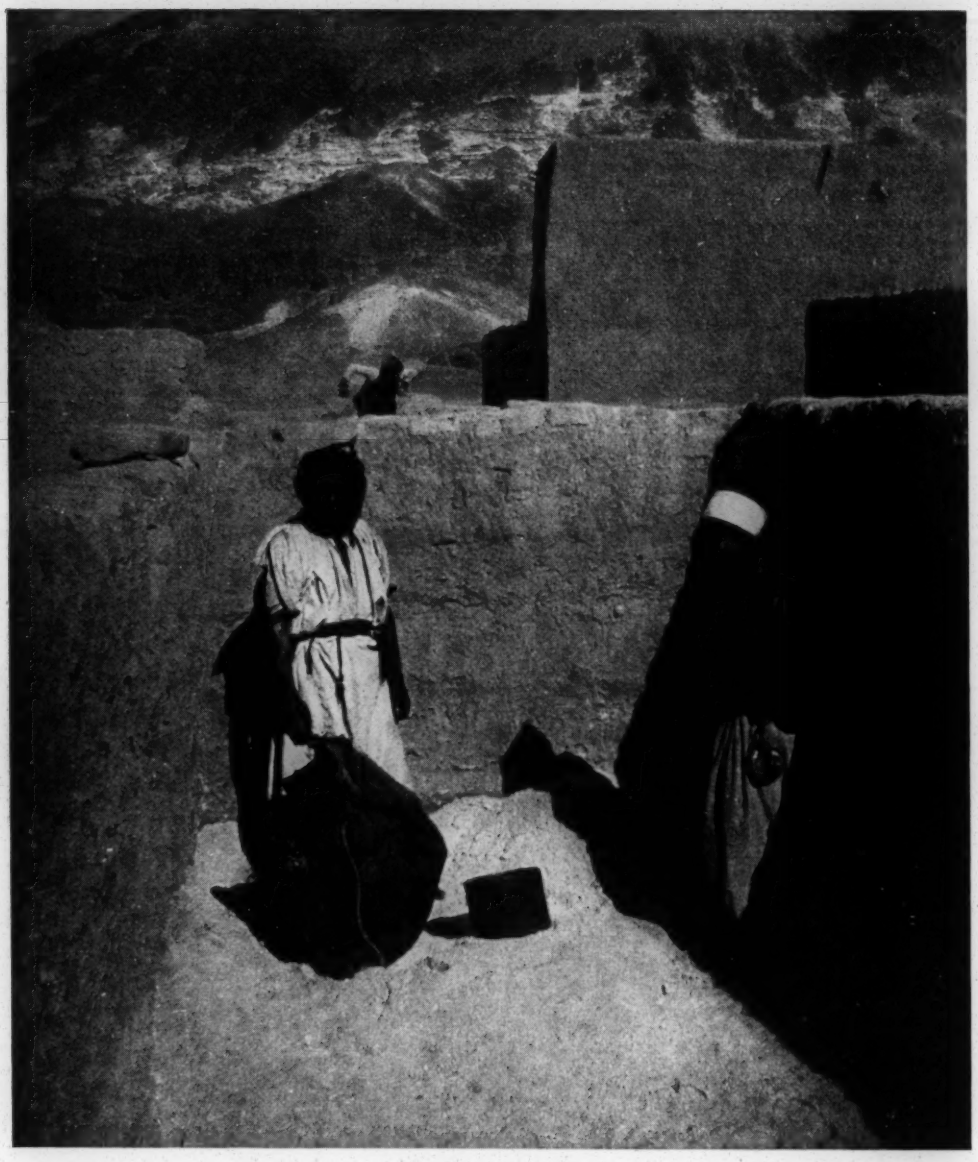
Large quantities of salt are exchanged for the daily necessities of life in Arabia. It is obtained from brine springs that are numerous in Arabia.

be lost in the trackless expanse of Arabia Deserta, and here really begins the new field of research and travel.

Due east of Medaba, on the plains of Moab, near Nebo, and at some 200 miles distant, is the twin town of Kaf, surrounded entirely by the desert. This place is under the jurisdiction of the great Ibn Rasheed, the independent ruler of Arabia, and is controlled by a local chief who is responsible to his lord and master in the distant metropolis of Hayil. To him the chief has to remit an annual tax of 80 cents for every male in his district, and to him must be referred all cases too difficult for solution by the local representative.

The Kafites obtain the necessities of life by the accumulation of salt, which is bartered in large quantities to men who come with caravans from the north, having with them wheat and barley to exchange. All around Kaf are never-failing springs of brine, which is drawn in skins and poured into shallow beds in the sand. The extreme heat soon evaporates the water, leaving a solid deposit of white crystal salt. When thoroughly dry this is stored in mud bins to await the coming of buyers.

This commodity, so essential to the daily life of the Arabian, generally fetches measure for measure of wheat and twice as much in barley, the former being preferred. The cultivation of the date-palm also claims a portion of the Kafee's time, not so much, however, for profit as to provide the morning meal



MEASURING SALT

Caravans carry salt from the oases to all parts of Arabia. It is usually bartered for wheat or barley. When dry it is stored in the open air in huge mud bins like the one shown in this picture.

CAMEL AND YOUNG

Thousands like these graze on the plains and deserts of Arabia. The female is rarely used for riding, not being accustomed to the strain

for himself and family. If he be an unusually energetic or ambitious man (which is unusual), he may cultivate dates to sell, there always being a demand by those who come with the caravans.

East of Kaf, about 25 or 30 miles, is a smaller oasis named Ithera. The people are less intelligent and most unkindly disposed to all outsiders, as the writer has good cause to remember, for it was here he had his first real experience of Arabian superstition and hatred of the Christian.

It came about thus: I had come unceremoniously among the people of Ithera without the necessary and all-important introduction to the chief. This for me was unfortunate, as it placed me in the position of not being under any one's protection, an important thing in such an out-of-the-way part of the world and among such an unfriendly people.

My sudden appearance in the guest-room of Ithera, without any previous idea of my being in the town, gave cause for speculation as to who and what I was. One suggested a Jew, another a Christian, another one of the heathen, another an infidel, while the last, more daring than all, informed the assembled wonderers that I was neither of what they had suggested, but a pig. I at length put them right on the matter by informing them that I was a Christian, upon which I was ordered by the chief to take my place with the cattle in the stable part of the guest-room.

This I did, but was not allowed long thus to remain, for the suggestion was volunteered that my near presence to both camel and horse might result in the speedy decease of both. So I was given a place to myself under the shade of a beautiful palm grove; but here my stay was shortened by the remark that "probably my close contact with the palms would hinder them from again bearing fruit." So again I was requested to move, this time being confined in a tent to keep company with one afflicted with a disease not unlike leprosy.

Thus was my first contact with the

isolated dwellers of the "desert of the sea." Alas for ignorance and superstition! How true the saying of the Bedouin: "He who travels not is both blind and ignorant."

The small population of Ithera, much less than Kaf, eke out an existence in much the same way as their neighbors, by evaporating salt from the springs that surround their tiny oasis, and it is only because their needs are so limited that they are able to exist.

Adjoining Ithera on the south is a prominent tell or mound about 100 feet high; on its top are the remains of an old castle which at one time must have been quite a stronghold and landmark in the desert.

Ten days' journey, as laden camels travel, south from Ithera is the great oasis of El Jowf, probably the largest center of population in northern Arabia. The word Jowf in Arabic means depression and literally verifies what it expresses, for El Jowf is indeed a considerable drop in the great expanse of Arabia.

I was fortunate in being able to journey from Ithera to El Jowf in company with the sheikh, *i. e.*, chief of Ithera, an opportunity that for me was fortunate, as it afforded me some amount of protection as well as secured for me a reliable and trustworthy escort across the desert. The company with which I traveled was composed of about 80 men and 120 camels, the latter laden with wheat that was to be bartered for dates or some other produce of El Jowf.

Great were the objections made to my accompanying the party across the desert, for would not I, being a Christian, bring trouble on the caravan? So argued the more fanatical of my traveling companions, and it seemed to them with reason, for a few hours after starting our party was set upon by a robber band, and in spite of our coming off victorious the blame for the attack was laid upon me.

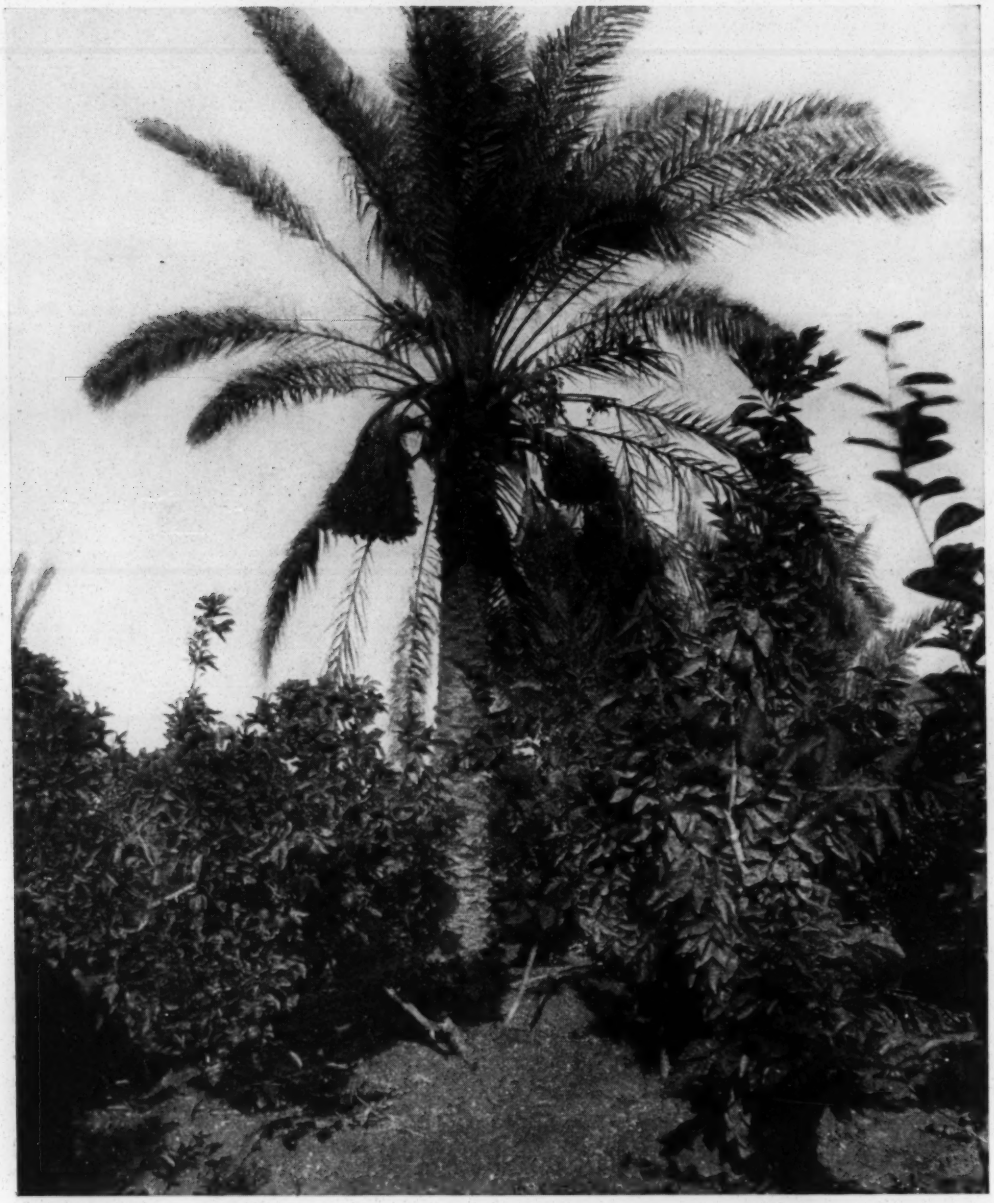
Some insisted that I be sent back, others that I be left to shift for myself, but my friend the sheikh said, "No; to the Jowf the Christian goes, even though we travel alone," so the next ten days were passed riding over the sandy expanse between Ithera and El Jowf in company with men strongly opposed to the presence of the Christian in their midst.

To me words fail when any description of the desert has to be written or given. It has to be lived in, crossed, slept on, made one's place of abode for a time in order to be really and thoroughly enjoyed. The boasting of the Bedouin about the free life they enjoy, and their pity for their city neighbors, confined in their close and dark dwellings, can be excused after a sojourn in the desert itself. But the desert life is not all honey by any means, for is there not always the danger of attack from the nothing-to-lose and all-to-gain Bedouin, or the risk of perishing for want of water, or the giving out of one's food without the possibility of being able to replace it? True, all these have to be reckoned with by him who would explore "the desert of the sea," but dangers of all kinds abound in every land and are not confined to Arabia.

The daily routine of travel was much the same. Up with the daybreak and as soon as possible load the camels; ride for some four or five hours; then put down for our first and morning meal, which usually consisted of dates and water; then off again until late in the afternoon, when a halt is made for the night. Supper usually consists of warm bread with an onion or dates as a relish.

Bread is prepared in as simple a manner as possible. While the coarse flour and water are being kneaded into dough a large fire is made which provides a good heap of hot ashes. On part of these the flattened dough is laid, then covered with the remainder of the ashes. In about fifteen minutes the dough is sufficiently baked. It is then well beaten to free it from ashes, broken in pieces, and divided among those who from their bags have contributed to the meal.

After the evening feast coffee is made by some member of the party and in tiny cups handed round to each one, as much

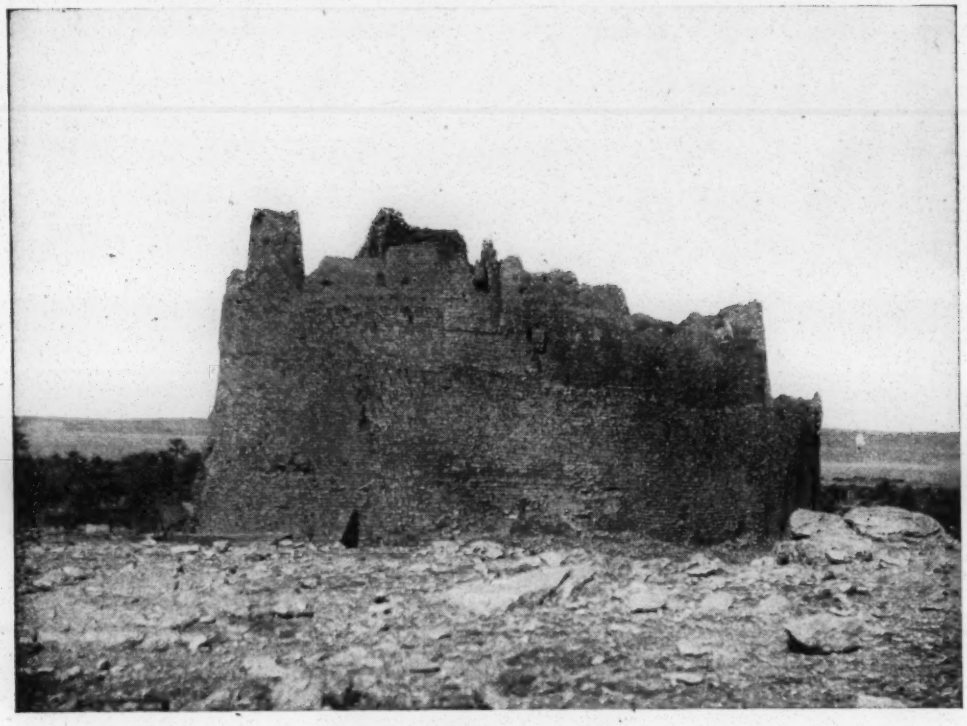


DATE-PALM WITH RIPE FRUIT

Dates take the place of bread in Arabia. There are many varieties. The date harvest comes in December and January and is a busy time for the natives

ITHERA, A HAMLET IN ARABIA

Probably once an important place guarded by a castle located on the high hill seen in the illustration. It is now a stopping place for caravans going into and from Arabia



THE CASTLE OF MARID

This formidable structure, now in ruins, stands at the north end of El Jowf, in North Arabia. The Arabs think it contains treasure buried there by the ancients. It serves no purpose at the present time.

regard being paid to etiquette as if they were assembled in the most spacious guest-room in the largest city in the country.

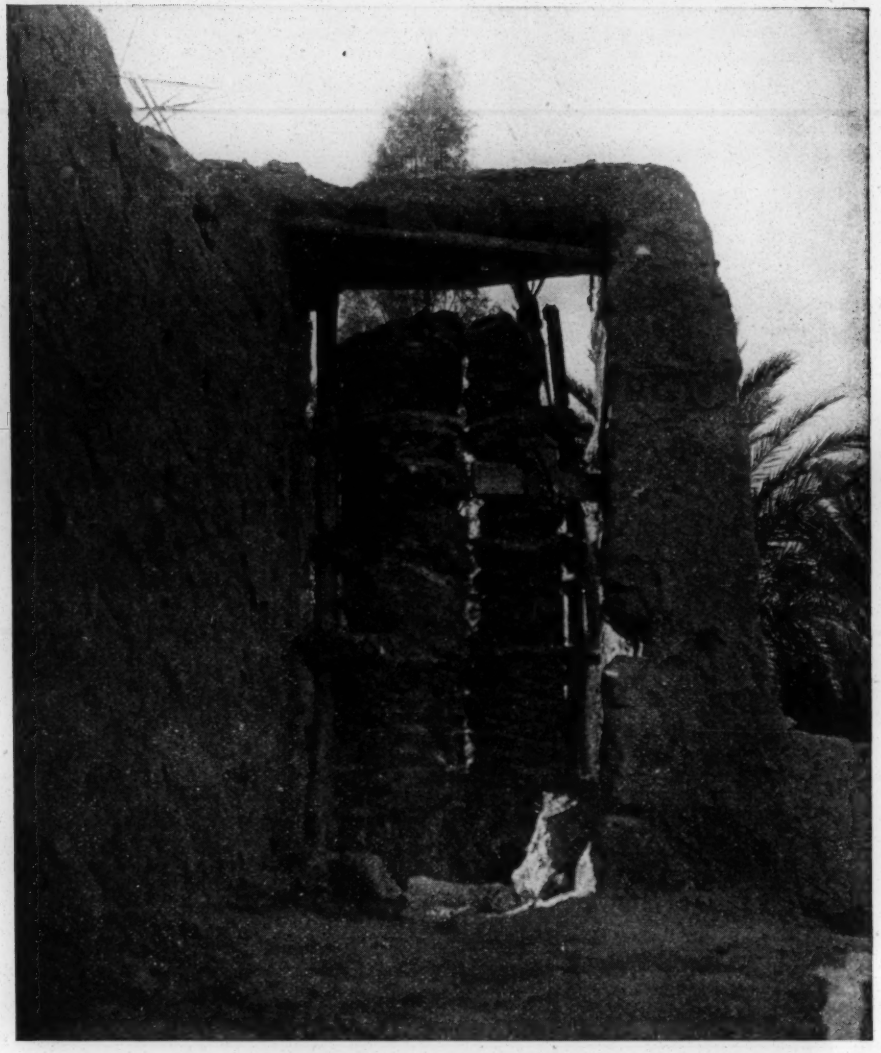
Conversation never lags, and until late in the evening the men talk, some telling imaginary stories, others reciting impromptu poetry, until, tired out, all except those designated to keep watch roll up in their large cloaks and are soon sound asleep.

The first thing to be seen of El Jowf as it is approached from the north is the great castle which rears its head high above everything else in the oasis. This building, which is circular in form, bears the name "Marid," and the ignorant Jofees believe that a large amount of valuable treasure lies hidden somewhere in the castle, but they are helpless to locate it.

This castle was at one time the stronghold of El Jowf and is no doubt of Arab construction, but as there is no use for it at the present time it is falling into decay. I was not allowed during my stay in the Jowf to go into the castle, although I took a very good photograph of it.

El Jowf is unlike other Arabian cities in that it is long and scattered, most of the houses being concealed among the palms, thus making it very difficult to estimate its size or the number of its dwellings. The city is probably two miles long and about a quarter of a mile wide.

The houses are all built of mud sun-dried bricks; many of them are three stories high, and all have flat roofs. The interior is quite void of furniture, the coffee roaster, pounder, pots, and



A PRIMITIVE DOOR IN JOWF

In the absence of lumber throughout Arabia, palm tree trunks are used for the construction of doors. Although rude in form and appearance, they answer the purpose for which they are made.

cups being about all that is visible that savors of daily life and needs. Most of the houses are doorless, accounted for by the scarcity of suitable wood. The only doors I saw during my stay were those that barred entrance into the palm groves and gardens. These were interesting because of their rude and primitive construction, being made of part of a palm trunk split down the middle and held together with strips of hide.

The abundant and luxurious date-palm plantations are explained by the number of deep wells that are found all over the Jowf from which a never-failing supply of water is drawn. The life-giving liquid is drawn to the surface in huge skins fastened to a rope attached to a camel

THE OVERCOAT OF ARABIA

A large coat of goats' or camel hair is the possession of every man in Arabia. It serves for blanket at night

that walks to and fro, thus raising or lowering the skin bucket. The water is emptied into pools and conducted through surface channels to the groves and gardens. The natives have an understanding among themselves as to the days and time allowed each one to draw water and irrigate their plots.

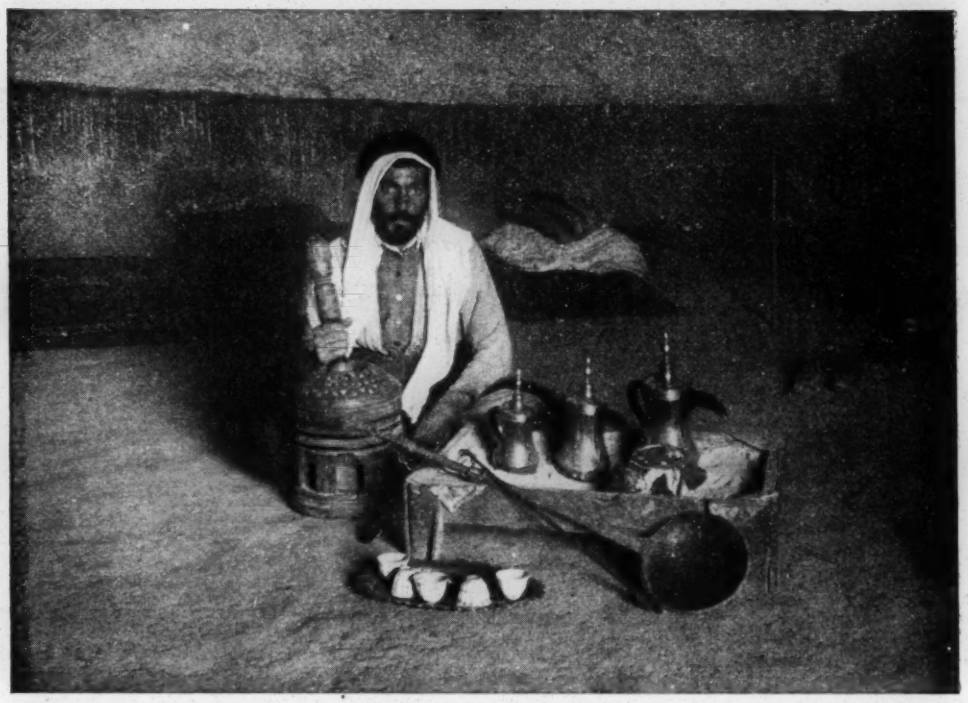
The population of the Jowf is a subject of speculation; some place it as low

ARABIAN WOMEN CHURNING BUTTER

Butter is made by shaking the milk in skins slung from a tripod or rolled to and fro on the earth. Both methods are shown in the illustration

SKINS FILLED WITH WATER

Zinc buckets are unknown in Arabia, hence the necessity for the water skin. These are used all over the land; they are home-tanned and if cared for and handled carefully will last a long time.



THE COFFEE-MAKER

The Arabians drink only the finest coffee, served in tiny cups. In most guest rooms and tents there is a coffee-maker who prides himself on the excellence of the beverage he can produce.

as 3,000, others much more. When I was there the chief told me he took tax from 40,000 men.

Jowf is noted for the variety, quality, and abundance of its dates, the cultivation and care of the palm giving employment to thousands of the natives. Thousands of camel loads of dates are sent annually to Damascus to be exchanged for goods suitable for barter among the Bedouins and Arabs.

I was interested in learning the many uses that the different parts of the date-palm were put to, including even the stones. As already stated, the trunk is split in two and made into doors, the fiber is woven into ropes and nets, the green fronds are split asunder and plaited into mats and baskets into which the dates are packed for export, and the stones, which are gathered off the floors of the people's houses, are soaked in water and when sufficiently soft mixed with meal and given as feed to the camels, on which they thrive very well indeed.

The dates ripen early in December, and the harvest continues until the end of January. The huge bunches are hacked off with a primitive saw or hatchet and then lowered by means of a rope to men waiting beneath, some of the bunches being as much as an ordinary man can well carry.

Another production of the Jowf much sought after is the abba or large outer cloak of the Arab. These are made entirely of camel's hair, spun and woven both by men and women on the most primitive looms imaginable, and the marvel is that they are able to turn out such well-made goods. In the markets of Jerusalem and Damascus the abba of the Jowf sells at a high price.

DAUGHTERS OF THE DESERT

The Bedouin women have the advantage of their city sisters in the free life they enjoy. Their faces are never veiled and their physical condition is better. The above are typical of thousands who live on the Plain of Arabia.

CARVED DOORS AT HODEIDA

The fine carving on doors and windows is about all that is of interest in this South Arabian port. No such work is done now-a-days, as the art of carving passed out with the last generation. Such work is worthy of preservation in a better place.

THE PORT OF HODEIDA, IN SOUTH ARABIA

The principal landing place for Yemen. All merchandise is landed in the way shown above, to the loss of the merchant, as the bales are frequently let fall into the water or soaked by the incoming tide.

The staple food of the Jowf is dates and temmin, the latter a cereal much inferior to rice, but raised in the oasis, as are grapes, apricots, plums, citrons, melons, tomatoes, cucumbers, beans, pumpkins, and a variety of other things foreign to the Occident.

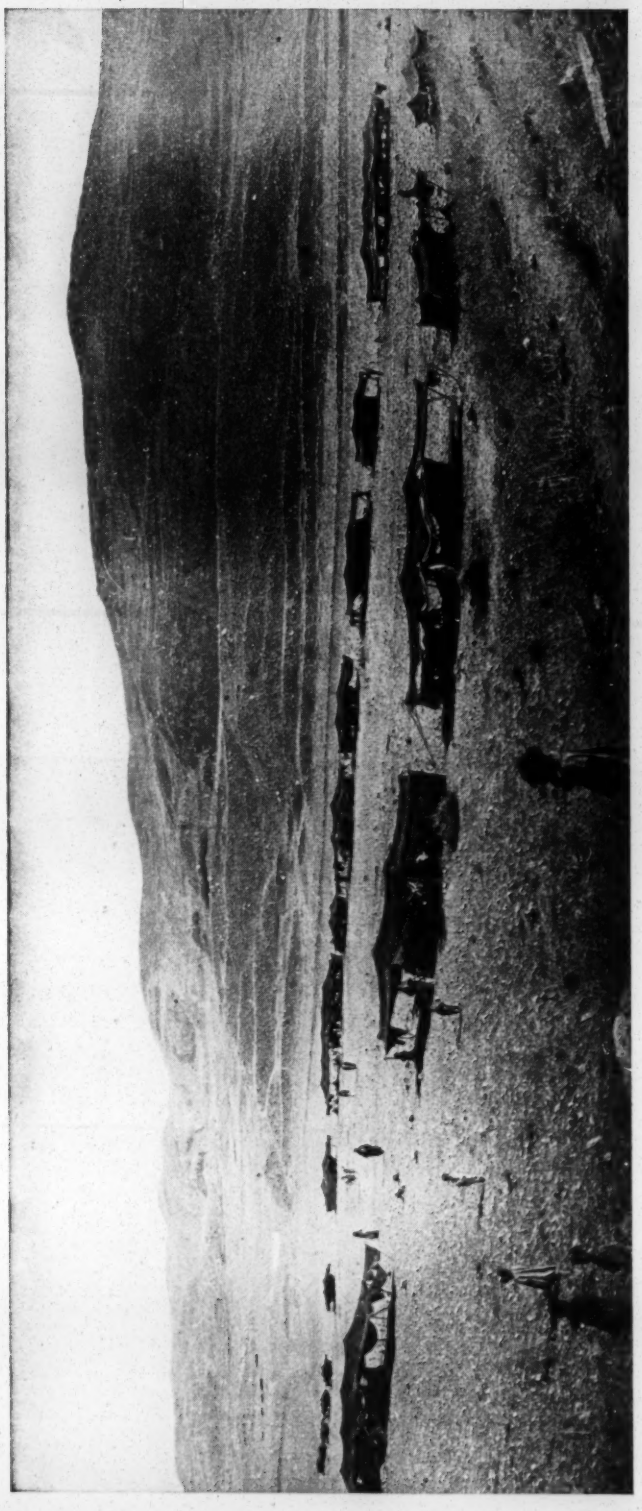
Newspapers, mails, or telegrams never trouble the Jowfees, and of course machinery in any shape or form is unknown, as are also vehicles on wheels or railroads.

The reader will naturally conclude that a people so isolated from the world must of necessity be superstitious, ignorant, and fanatical, and in all these respects the Jowfee excels.

While I was in the Jowf, and after some trying and not altogether satisfactory experiences with the chief, a high tower, part of that dignitary's castle, fell in, badly crushing and wounding him, so that his life was despaired of for several days. Hundreds of the men and women believed that I was the sole cause of the accident and circulated the report that "with my evil eye I had affected the tower and caused it to fall," and so scared was the chief himself that he preferred ending his days with broken limbs rather than have me near him to set his bones, which he did.

Another thing that was noticeable at the Jowf was the extreme zealousness of the people in their religious observances, even the boys giving heed to the appointed hours of prayer. I noticed, too, that, unlike cities in other Mohammedan lands, there were no mosques, the gathering places for prayer being a large space enclosed on three sides by a high wall, roofless, and void of all ornamentation.

El Jowf is tributary to Ibn Rasheed, and is controlled by a chief who holds office as long as he proves himself capable and turns in the annual poll tax levied

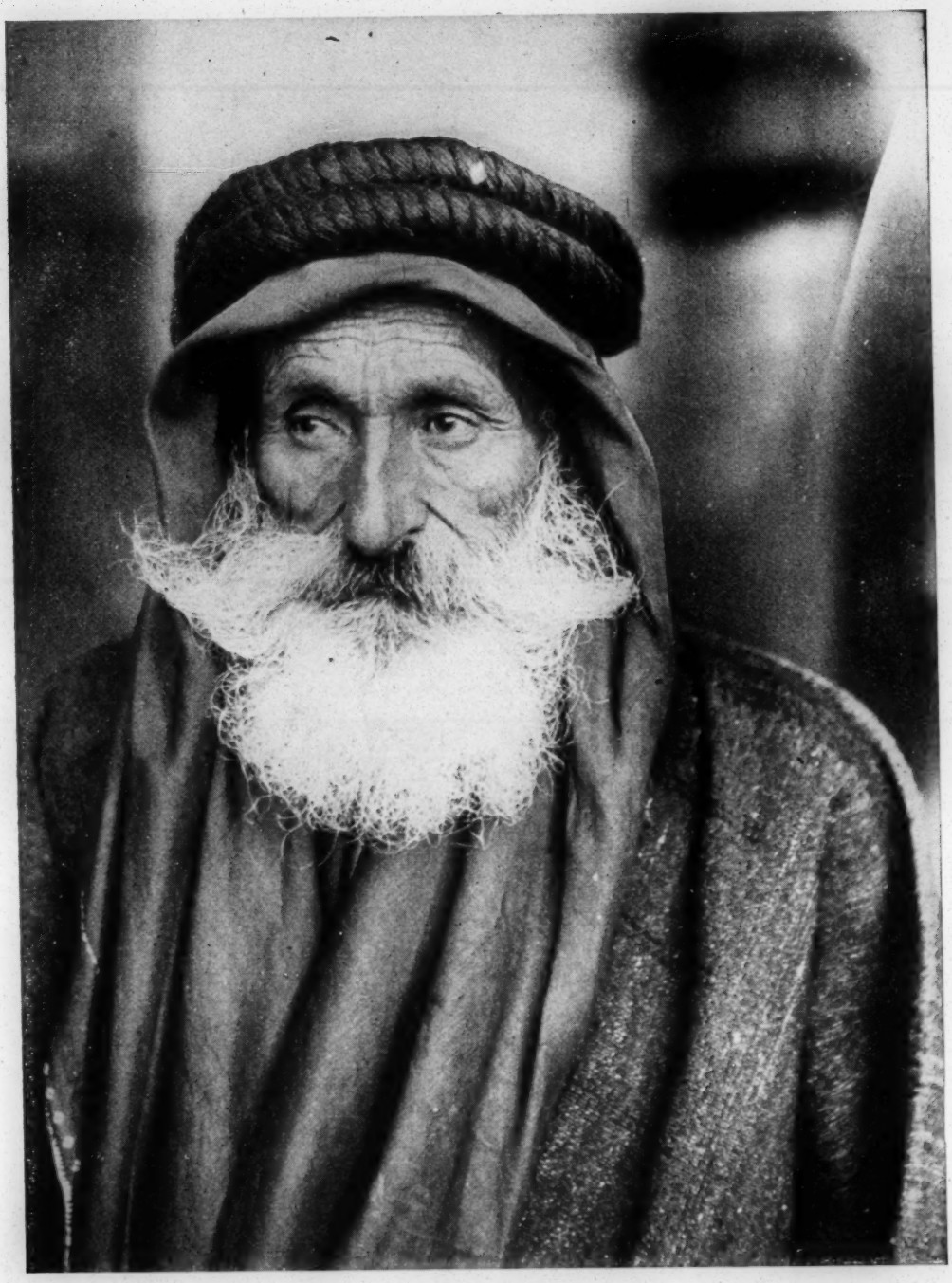


A TYPICAL BEDOUIN CAMP

The tents are made of goats' hair. At night the stock of the Arabs is sheltered in the inclosure and fierce dogs guard the camp. One tent is set apart for the entertainment of guests

A BEDOUIN TENT

The home of the Bedouin is made of goats' hair cloth, spun and woven by the women. It is very durable and portable and forms a good protection in all kinds of weather



AN ARAB SHEIKH

on the men under his jurisdiction. The official residence of this important person is a most uninviting place, being a series of rooms enclosed by three high walls with intervening courts. On each corner of the outer wall is a tower some 30 feet high, from which an outlook is kept across the desert in all directions.

Wheat or barley bread is eaten as a luxury in the Jowf, a kind of bread being made from a small seed known as semmah, much in appearance like red sand and very unpleasant to the uncultivated taste. This seed is gathered off a small bush that grows wild in and about the oasis.

About all that is known of the country between Jowf and the Persian Gulf has come to us through the writings of Palgrave, Blunt, Doughty, and Euting, all of whom traveled through the central and eastern parts of the peninsula. Since these were in the land so many changes have occurred that the modern traveler would find much fresh material to record, while photographs of that land are as yet practically unknown. Here, then, is a field for those who are ambitious to do something unusual.

Yemen in the south is difficult of approach owing to the extreme jealousy of the Turks on the coast.

The principal port of Yemen is Hodeida, reached by coasting steamers from Aden. The condition of this port has been a subject of much discussion between the Powers and the Turks, the latter preferring the difficult approach to anything that savors of improvement, or that would facilitate trade or encourage the native to better his condition.

All steamers arriving at Hodeida have to lie out in the open roadstead, while the cargo is landed in small boats. Even these cannot unload alongside the quay, the bales and boxes being carried ashore on men's shoulders. Both man and burden are often deluged by the incoming tide and huge waves, much to the detriment of the merchandise and serious loss of the trader.

Hodeida has little to attract, things ancient being conspicuous by their absence. About the only things of interest in this Arabian port are some finely carved doors which adorn several of the residences. The art of such carving has passed away, none of the present inhabitants being able to do such work, although they appreciate and admire what their grandfathers did in the times that are gone (see page 1056).

From Hodeida goods are transported into all parts of Yemen, mainly on mule back because of the mountainous nature of the country.

Another port of Yemen that once claimed attention is Mocha. From it large quantities of the finest coffee used to be exported, but owing to the increased taxation, heavy export duties, and robbery by the Ottoman officials the Mocha coffee business is largely a thing of the past.

A large exportation of dates, rawhides, spices, and mother-of-pearl is carried on from the ports of the Persian Gulf, with a little more encouragement and protection to the native by reason of the strong British influence in those parts.

Wherever people are found in the Arabian peninsula with the most limited number of milk-giving animals, such as sheep, goats, or camels, there will be found the national substitute for the lard of the Occident or the olive oil of other lands, a very favorite production called "semmin."

This is a butter which is made in primitive, simple, and unappetizing manner by being churned in a skin which has been none too well cured and does not recommend itself for cleanliness. The mode of procedure is simplicity itself, the milk being put into the skin and then either swung backward and forward on a tripod, or rolled to and fro on the ground, until the fat of the milk forms itself into butter. A favorite dish to set before a distinguished guest is a mixture of dates and butter.

Another interesting fact about the Arabian people is their complete abstinence from all kinds of intoxicating drinks. Many little etiquettes are observed in connection with the serving of

the national beverage, coffee, such as the host tasting the coffee himself ere he offers it to his guest, or the filling the tiny cup more than a third full, or offering a third drink, which is equivalent to asking your visitor to leave your house or tent.

As regards the great and almost unknown interior little of any certainty can be written. In the central region known as Nejd are quite a number of large cities, such as Hayil, Boreida, Anezea, El Riath, Dooreayah, with numerous smaller towns, villages, and settlements within easy distances, to say nothing about the extensive camps of the Bedouin, who own allegiance to the Emir in the capital.

These latter are probably the more numerous of the peoples of the peninsula, and by far the most interesting class of the two. The Bedouin pities the city dweller because fate has decreed that he must pass his days in the confinement of a house or enclosed city, while the city man congratulates himself on his good fortune in being spared the dangers, inconveniences, and exposures that are the lot of the tent-dweller.

The life of the latter is an uncertain one. His tent is home made, spun and woven by the women of his harem from goats' hair, the accumulation of many years. This tent cloth is waterproof and a good protection against the fierce sun of the desert. It is very portable and serves for many generations. Each camp has its chief, part of whose tent is set apart as the guest room, in which visitors are entitled to three days' hospitality. The chief also gives the order to move camp and decides on the new pitch. Local disputes are referred to him for settlement, and in the event of his being unable to adjust the matter the disputants must go to the capital and present their case to the Emir. This they are slow to do, as it means a long journey and absence from home for an uncertain time, as well as some amount of expense. The chief, too, is responsible for the good behavior of the people in his district and for the return of the tax due from his tribe.

Throughout Arabia there are many things in common among both classes of the people, viz., the manner of clothing among both sexes; little distinction is made between the rich and the poor, and from a man's clothes no idea could be gotten of his social standing.

In all homes it is customary for the host to assume the place of waiter during the serving of food, taking his meals after all the others have been served.

As in other Mohammedan lands, the women in the cities and towns of Arabia are secluded, but in the village and camp life they enjoy the same freedom as the men; the women, too, do a large share of the work in coöperation with the male members of their families.

The great need of the Arabian peninsula is water, for without that all-important factor of every-day life little can be accomplished, and the entire absence of running water in any shape or form accounts largely for the lack of any forward movement or attempt at industrial or manufacturing achievements.

Where water is obtainable it is generally from wells of great depth, causing a large amount of labor to get it to the surface. Some of these wells are evidently ancient, as evidenced by the stones of many courses near the mouth and the deep grooves worn by the ropes of the drawers during many centuries. Some of these grooves are as much as nine inches deep in stone as hard as marble.

Enough has been told in these pages to give an intelligent idea of the "desert of the sea," and to demonstrate that here remain fresh fields for exploration, research, discovery, and possible adventure. For any attempting such an expedition it is hardly necessary to say that a knowledge of Arabic is essential in order to get at facts and a reliable record of things past and present.

The field is open to all. Any one who can bring to the civilized world some information on central and southern Arabia will add valuable data to the geography and literature of the day.

A COUNTRY WHERE GOING TO AMERICA IS AN INDUSTRY

By Arthur H. Warner

WHILE on a visit to Piana dei Greci, an Albanian settlement on the mountains 12 miles out of Palermo, I asked what the leading industries of the place were.

"Agriculture and emigration to America," was the reply.

The answer would be equally true of all that part of Italy which lies south and east of the city of Naples, including Sicily. It is this region—whose people are the most untutored and whose land is the least developed in the kingdom—that for almost a score of years has been pouring its lifeblood into the United States, until it has given us a population of some 2,000,000 Italians, and brought it about that at least every eighth man, woman, or child in the city of New York is of that race.

In my effort to see the Italian emigrant as he is at home, I went first to Sicily, partly because of the magnitude of the exodus from that island within recent years—110,477 annually from 1905 to 1908—and partly because, of all his race, the Sicilian has as yet the fewest friends in America. There was a time in the United States when it was customary to condemn Italian immigrants *en masse*. Later it became the fashion to assert that, while the northern Italians might be desirable, those from the south were otherwise. Still more recently it has come to be said that some southern Italians might be all right, but the Sicilians are a dangerous and lawless set, responsible for the "Black Hand" outrages and other crimes among their people.

One of the first localities I visited while making my headquarters at Palermo was Termini, a seaport 25 miles to the eastward, with a reputation for making the finest macaroni in Italy. I had heard it spoken of as an "American town" and, inquiring the reason, it was explained that the leaven of emigration had worked so powerfully there that half the population was in America and the rest was likely to go before long.

"You will see many women there," I was told. "You will find them keeping the shops and doing the work which there are no longer any men to do."

And so it proved.

The population of Termini, I was informed by residents, was about 25,000, by comparison with a number nearly twice as great when the emigration movement set in 15 years ago.

"But it has helped the town," they continued. "There are fewer people here now than once, but more money. Capital that has been earned in America has been invested here and the city was never more prosperous. Some 200,000 francs a month come back from townsmen in the United States and the principal bank here holds 8,000,000 francs against the names of emigrants who are at work in America."

Come with me through this island of Sicily somewhat and see if its people are the degenerate and undesirable sort that they are frequently pictured. From Palermo, on the north coast, situated in a wonderful valley of lemons and oranges known as the Conca d'Oro (shell of gold), we will go south through the interior to the blue rim of the African Sea where stand the golden brown temples, which the Greeks reared at Girgenti 2,500 years ago, and then back into the sulphur country and eastward to Mount Ætna.

The lemons and oranges which are so great a part of Sicily's wealth we lose soon after leaving the coast, for they must have water, and it is not to be found in this treeless interior. In their stead are groves of olives and almonds and fields of barley and beans, which last

Photo by Arthur H. Warner

STREET SCENE: TERMINI, SICILY

play as important and varied a part in the diet of Sicily as do potatoes with us, while the untilled stretches are crimson with patches of sanfoin, and dotted with wild poppies, morning glories, and yellow clusters of the fiori di maggio (flowers of May). One misses here even the spreading stone pines of Naples and, except for an occasional cypress, scarcely a shade tree is anywhere to be seen, the forests long since having been ruthlessly destroyed, much to the detriment of the land and the present generation.

In the heart of the sulphur region it becomes more desolate. Nothing seems to grow here. Even at this season, the springtime, the valleys and hillsides look old and weary and in summer they parch up like a desert. To make matters worse, the surface is torn up by mines and the waste dirt is piled about in ugly, forbidding heaps which lie like a blight upon land already poor enough.

Mining may be a necessity, but at best it is only a necessary evil. It destroys nature and despoils the earth just as agriculture preserves and uplifts it. And so, too, with men. The one occupation seems to degrade and brutalize just as the other broadens and uplifts those who engage in it.

The miners in the sulphur country work from six in the morning until seven at night, with an hour off at noon, for from 40 to 60 cents for a full day, but do not work Sundays and usually half time only three days out of the six; so perhaps $2.50 would represent an average weekly wage.

No wonder men leave such a life, even for the tenements of Elizabeth Street, or the mines of the Alleghanies. At the time of my visit to Sicily, emigration was almost at a standstill. Yet, even so, one encountered bands off to the new land.

I shall not soon forget the first party of departing emigrants I saw. It was at a dreary little station in the sulphur belt, and the moment the train drew in one might know that some great event was taking place by the crowd of women, some gnarled and seamed with the years like the olive trees of the hillsides, who gathered on the platform, each one with her black *manto* drawn close about her head.

The train stopped and the guards opened the doors with a mighty clattering. Half a dozen young men, with a hurried look backward, jumped into the nearest compartment, dragging or push-

ing their worldly all in huge bundles as they went.

"Pronti! Pronti!" shouted the conductor, and the doors were banged shut again as mothers, wives, sisters, or daughters stood weeping and clinging to the ones they loved.

The *capo di stazione* sounded his bell, the engineer answered with a toot of the whistle, "Pronti! Pronti!" roared the conductor again, and the train was off, leaving in a cloud of dust the miserable group of women huddled in front of the forlorn station whence the stronger ones had departed to return—who knows?

Let us leave this desolate sulphur region and climb the heights to Castrogiovanni, a town of 25,000 inhabitants, on the flat top of a hill half a mile above the valley below. It and Calascibetta, a twin city on a corresponding peak a couple of miles across the valley, are two of the most picturesque places on the island. To protect themselves from the fog and cold of the high altitude the men of Castrogiovanni, like those of other mountain towns in Sicily, wear hooded cloaks, resembling the Moorish gelab, probably a survival of Saracen days in Sicily. They are a clear-eyed, clean-skinned people, honest and courteous in their dealings, and unspoiled by tourists or contact with the world beyond. Scarcely among such can one find the criminals and depraved that he has heard of as springing from Sicily.

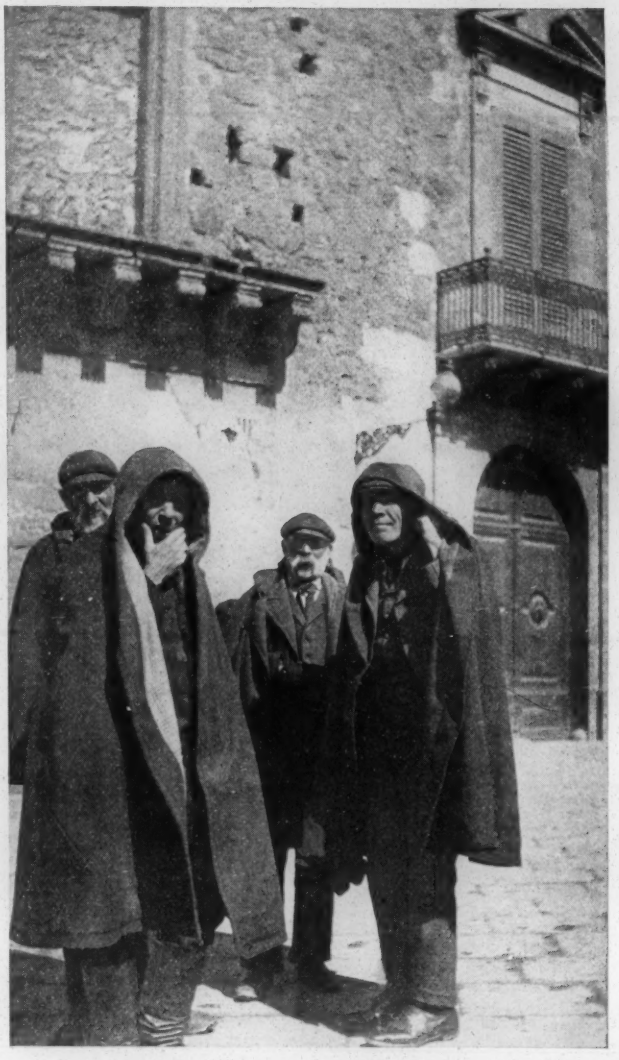


Photo by Arthur H. Warner

IN THE PUBLIC SQUARE: CASTROGIOVANNI, SICILY

The hooded cloaks are probably a survival of the Moorish gelab of Saracen days

On my first afternoon in Castrogiovanni, while strolling down the main street I was accosted in good English by a man who recognized my nationality and told me that he had lately come back from America, after working there two years as a barber. His mother's health had gone to pieces and the doctor had advised him to return to Sicily with her, although he was doing well in America financially.

"Money is money," he said, somewhat

Photos by Arthur H. Warner

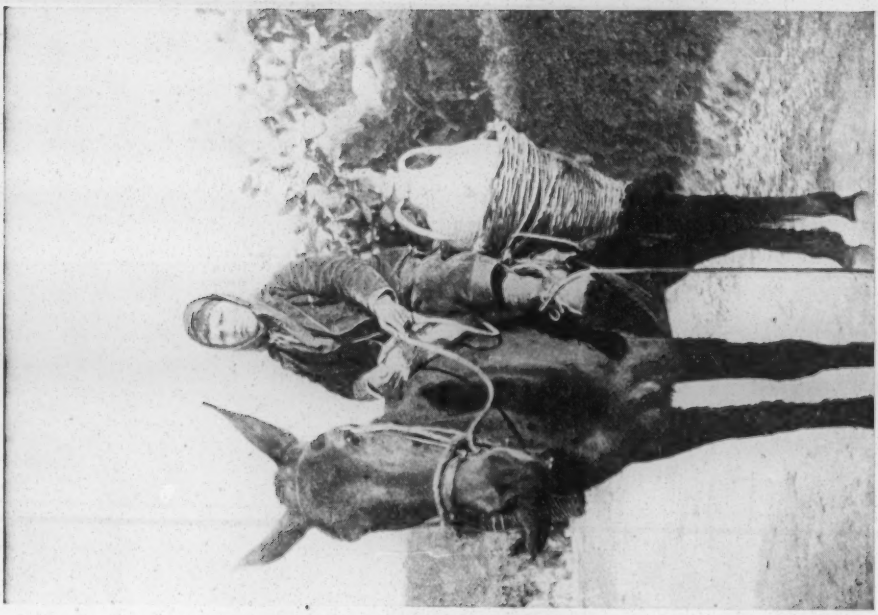
PIANA DEI GRECI

One of four settlements made in Sicily by Albanians in the fifteenth century

STREET SCENE: SETTINGIANO, CALABRIA

A SICILIAN ROAD Photo by Arthur H. Warner

Showing the giant cactus or prickly pear used for hedges on either side

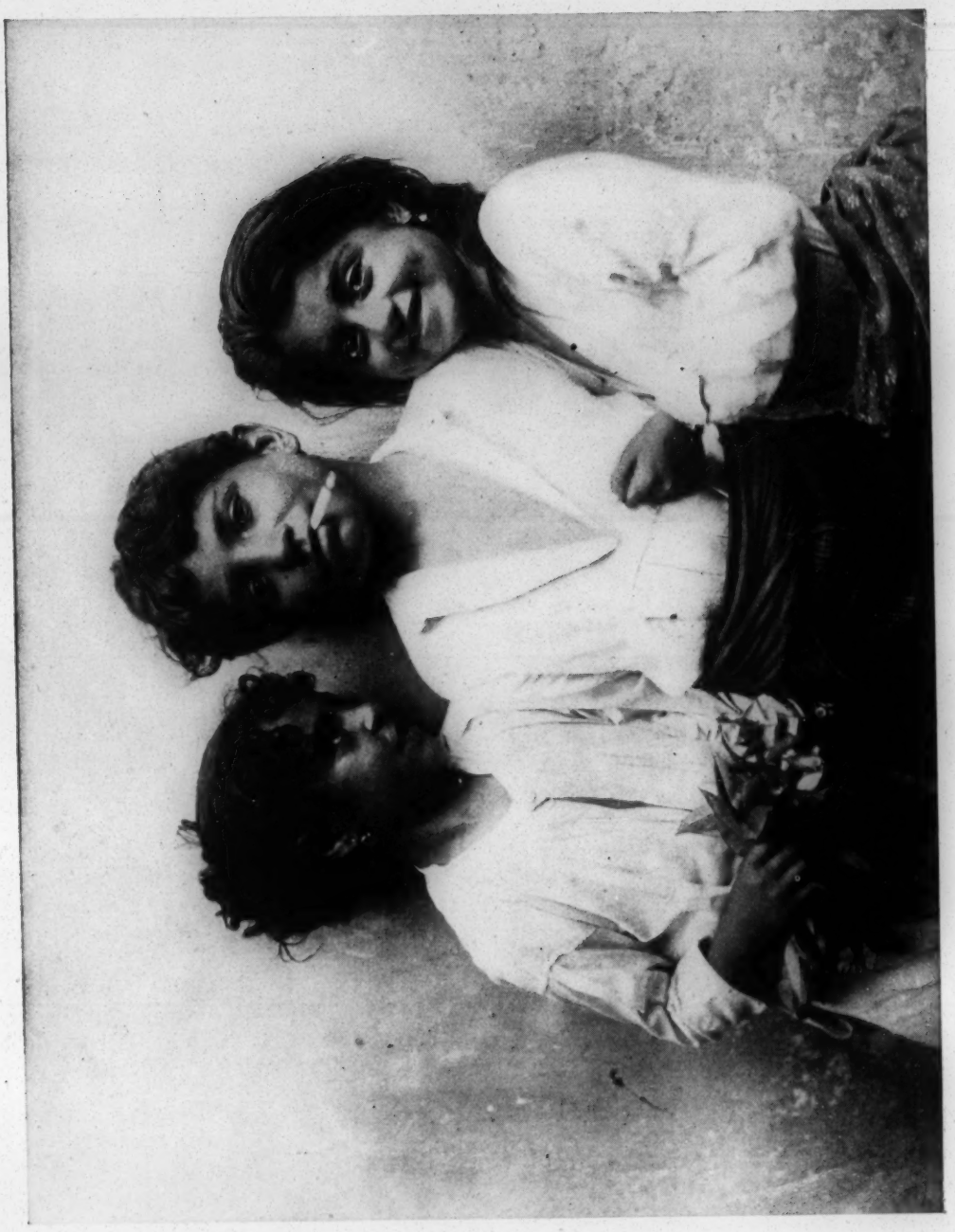


Photos by Arthur H. Warner

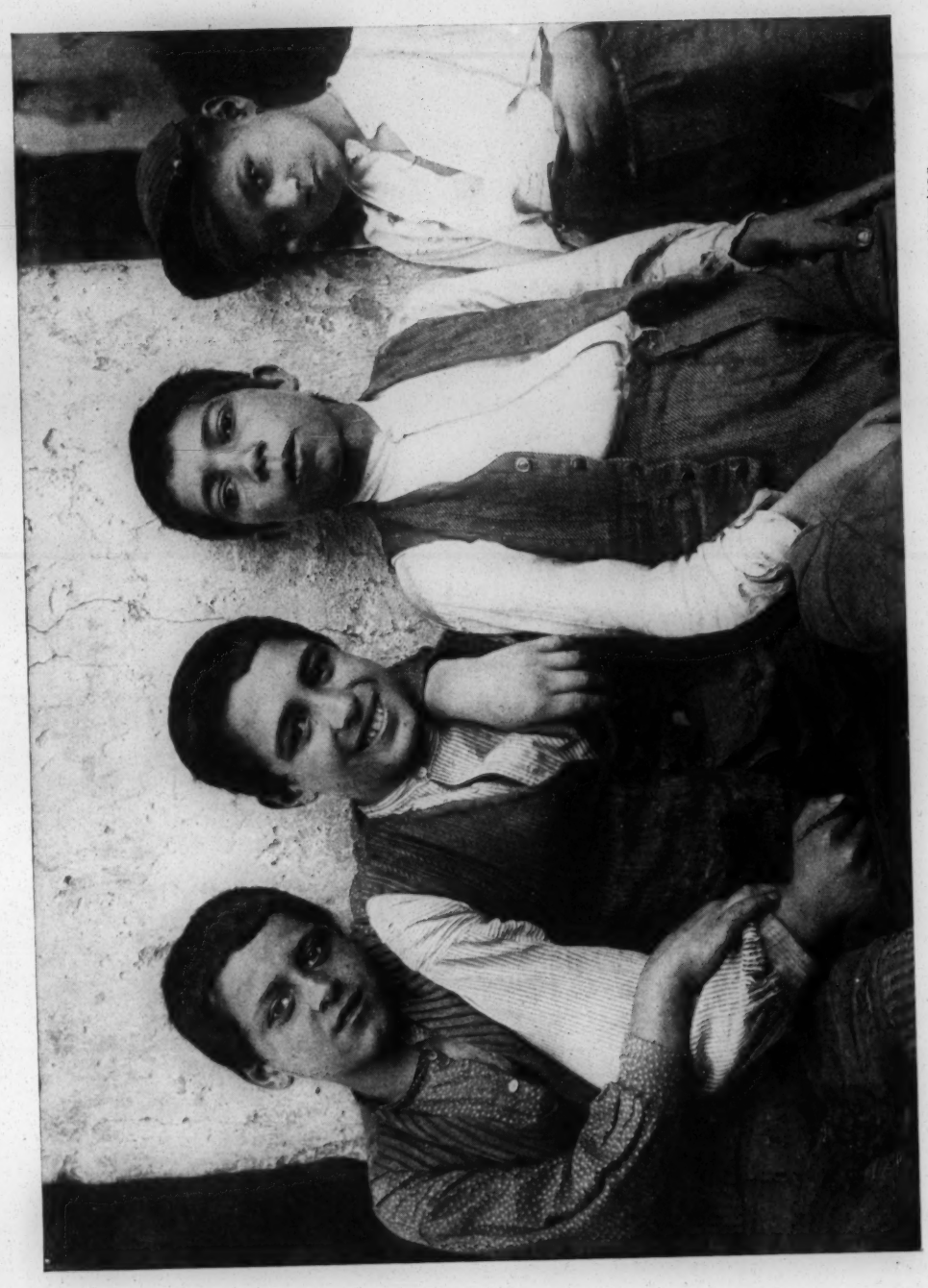
COUNTRY SCENES IN SICILY

A SICILIAN YOUTH

The illustrations on pages 1069–1095 are all from photographs by W. von Glöden, of Sicily, who for many years has been trying to portray in photographs the variety of race and romantic charm of that island "where going to America is an industry."

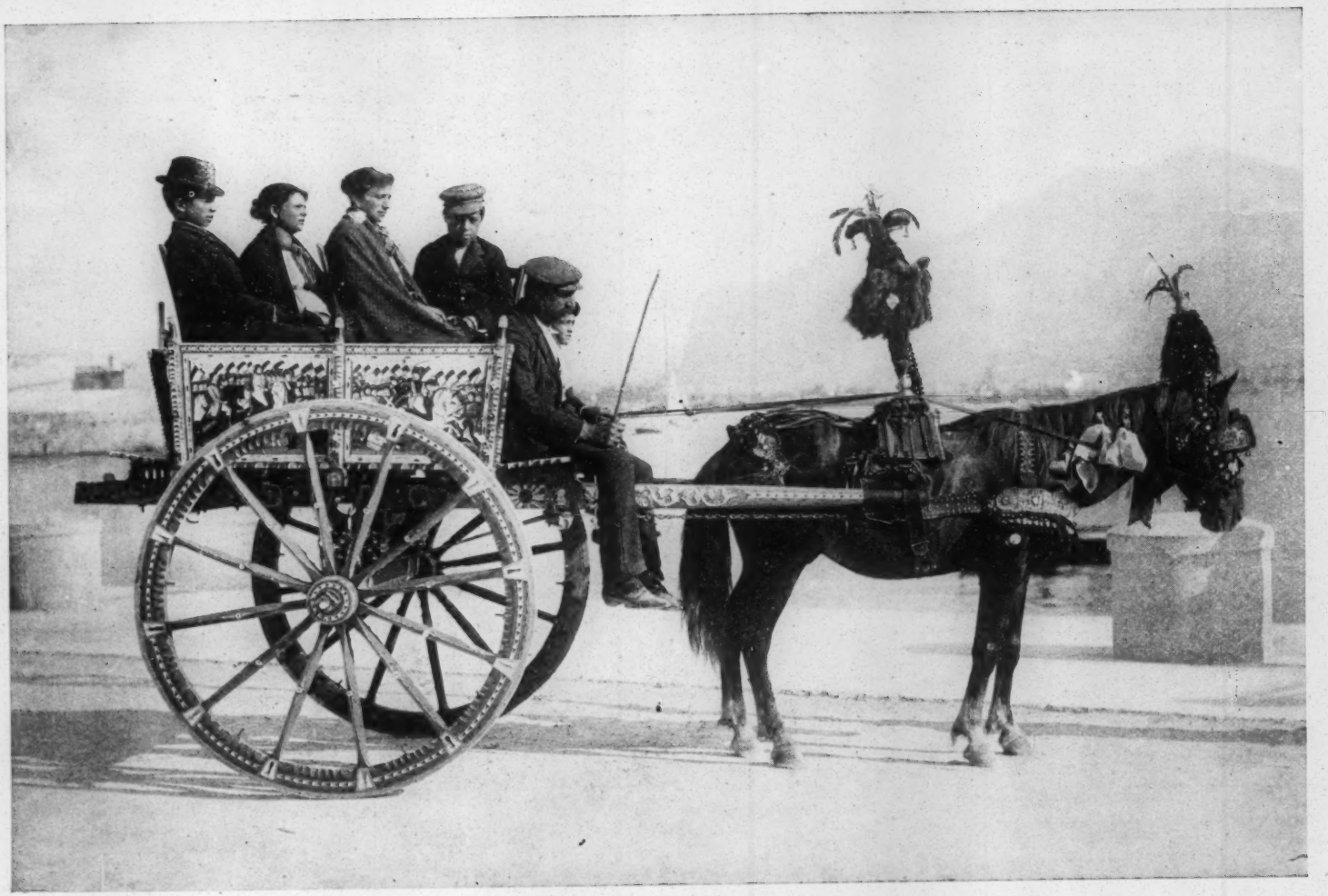


CARE-FREE CHILDREN OF SUNNY SICILY



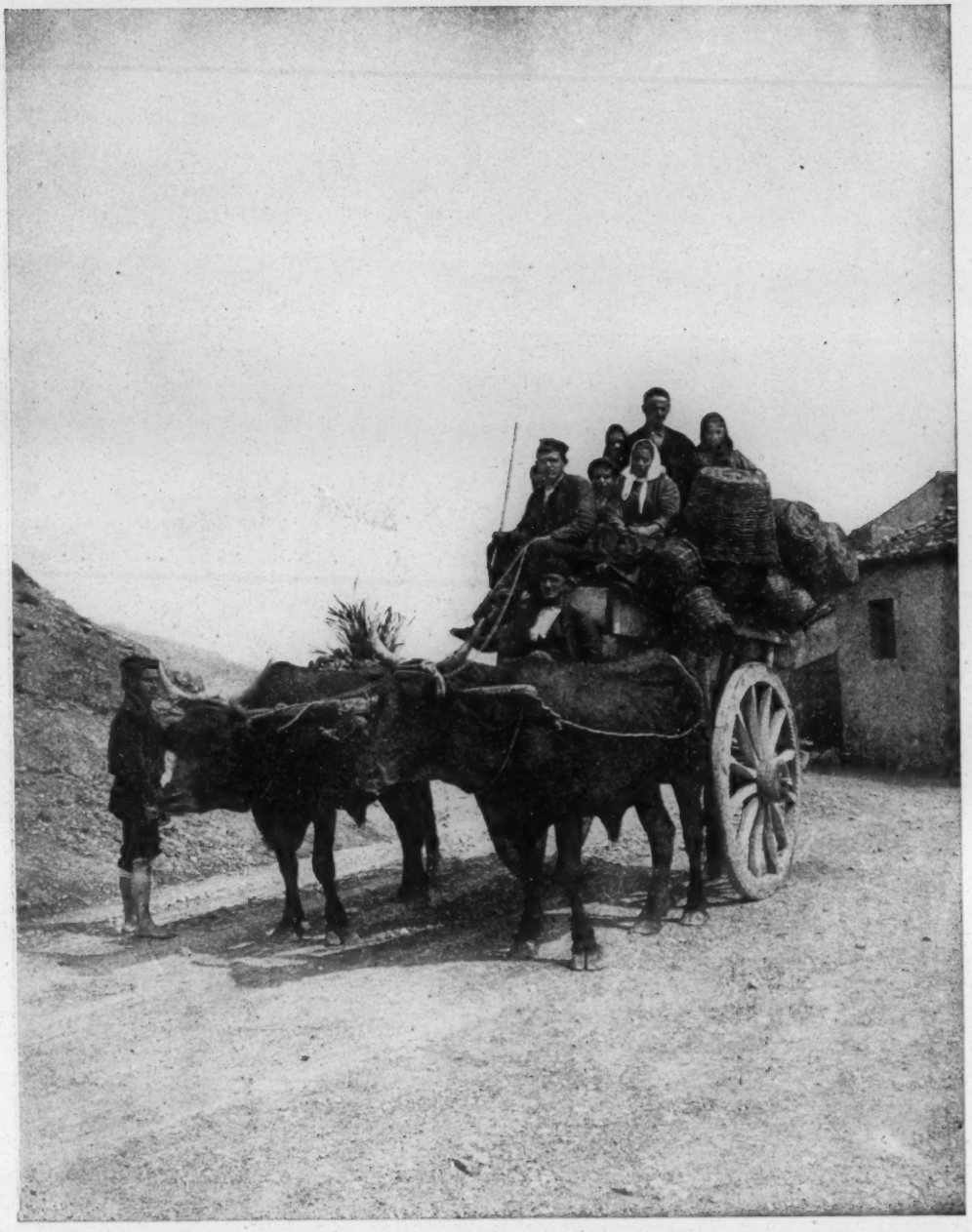
YOUNG SICILIAN BOYS WHO PERHAPS SOME DAY WILL BECOME AMERICAN CITIZENS

CARE-FREE CHILDREN OF SUNNY SICILY



A SICILIAN CART (SEE ALSO PAGE 1102)

The gaudy coloring of the Sicilian cart and the picturesque allegories painted upon it fascinate and puzzle all visitors to Palermo. Incidents in the life of Ulysses, of Achilles, of Olympian gods and demigods, battles of the pagan deities and Christian saints, of the Crusaders and Saracens, and countless other historical and mythical subjects are represented in glowing colors and usually with considerable skill.



BOUND FOR THE MARKET: PALERMO, SICILY

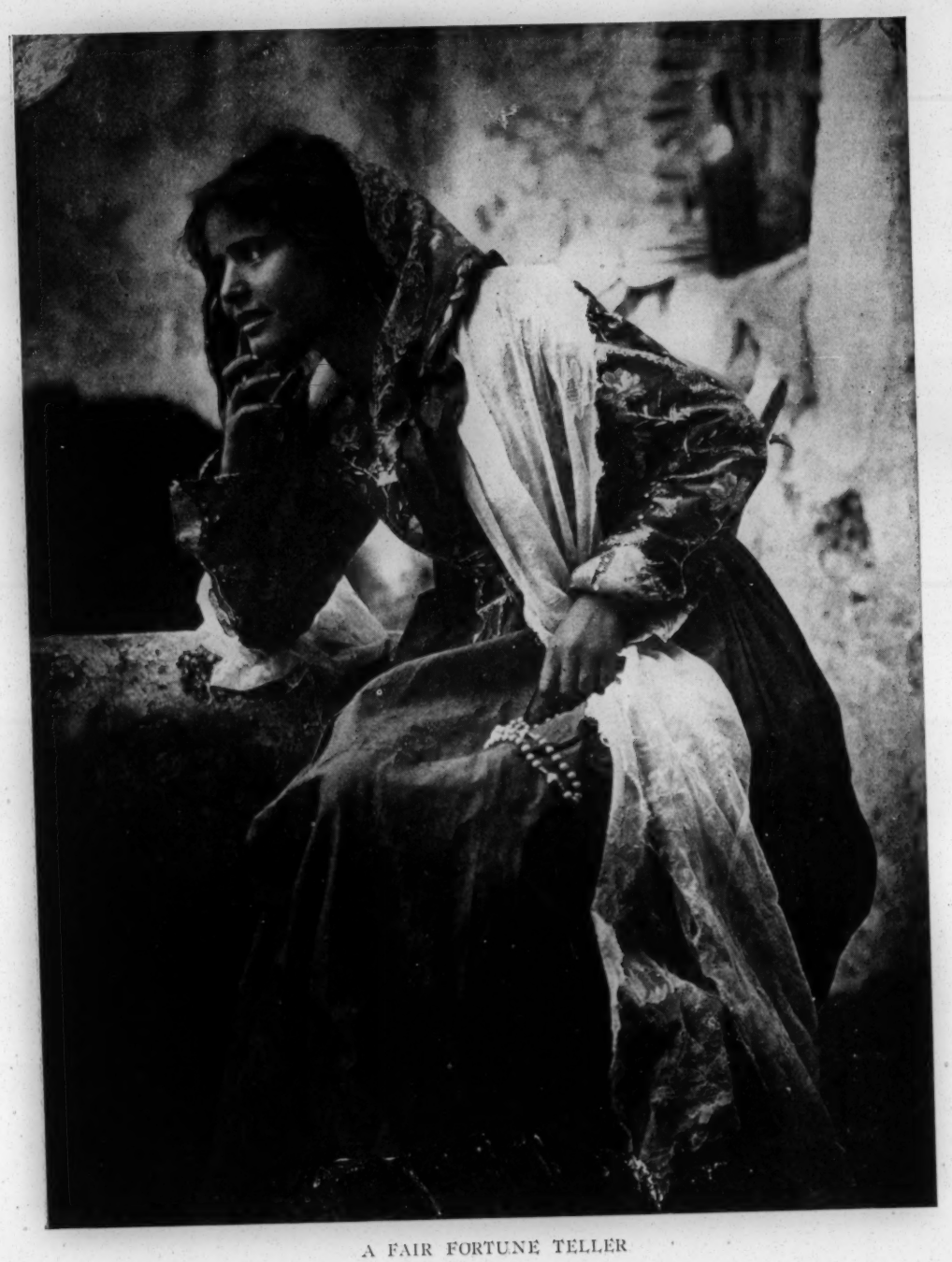
WHAT SHALL WE DO?

A CHILD OF SICILY

A COMMON SCENE IN SICILY: THE STREET COBBLER AND THE TELLER OF PARABLES

VILLAGE LIFE IN SICILY

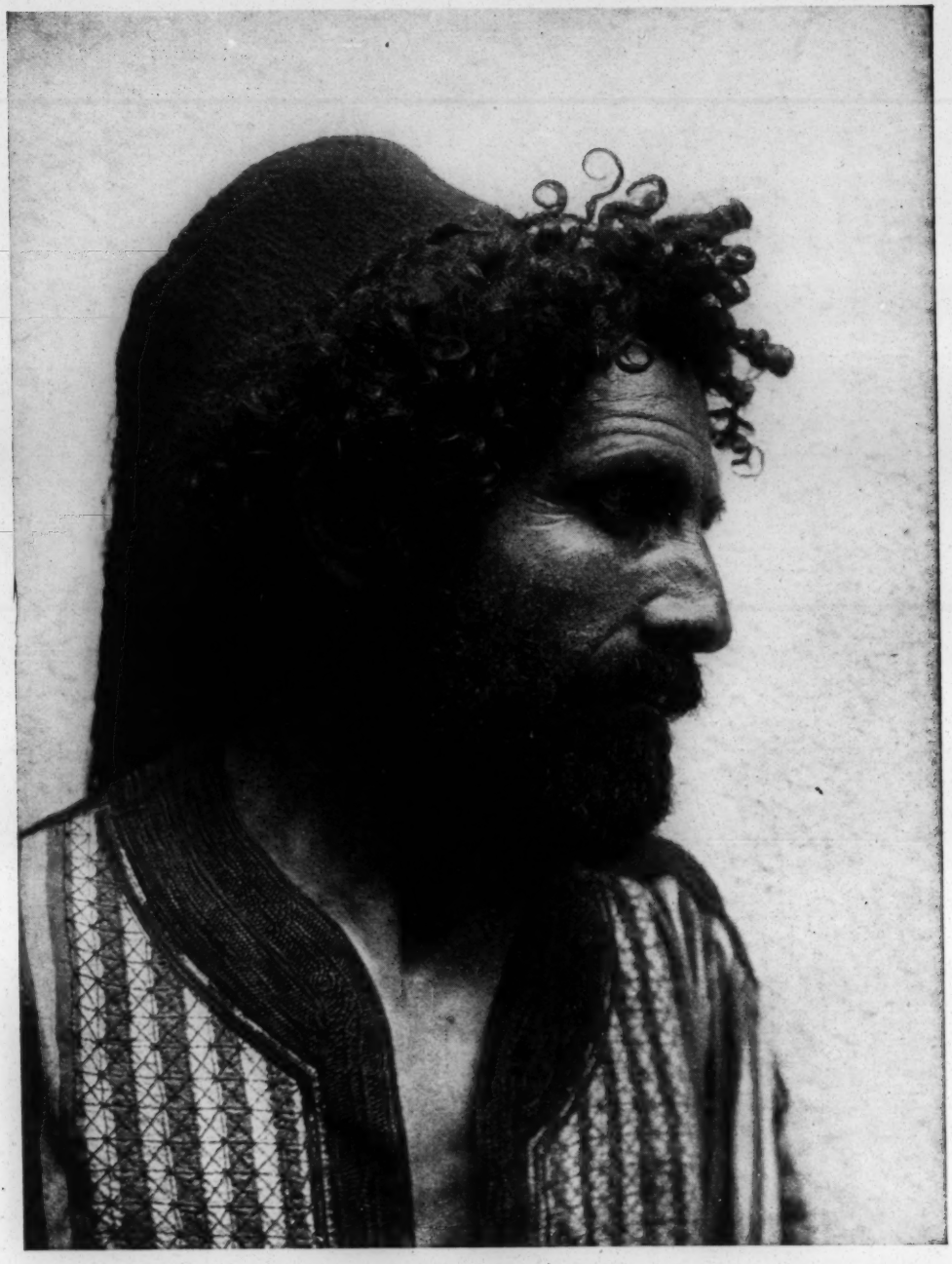
A PASSION FLOWER



A FAIR FORTUNE TELLER

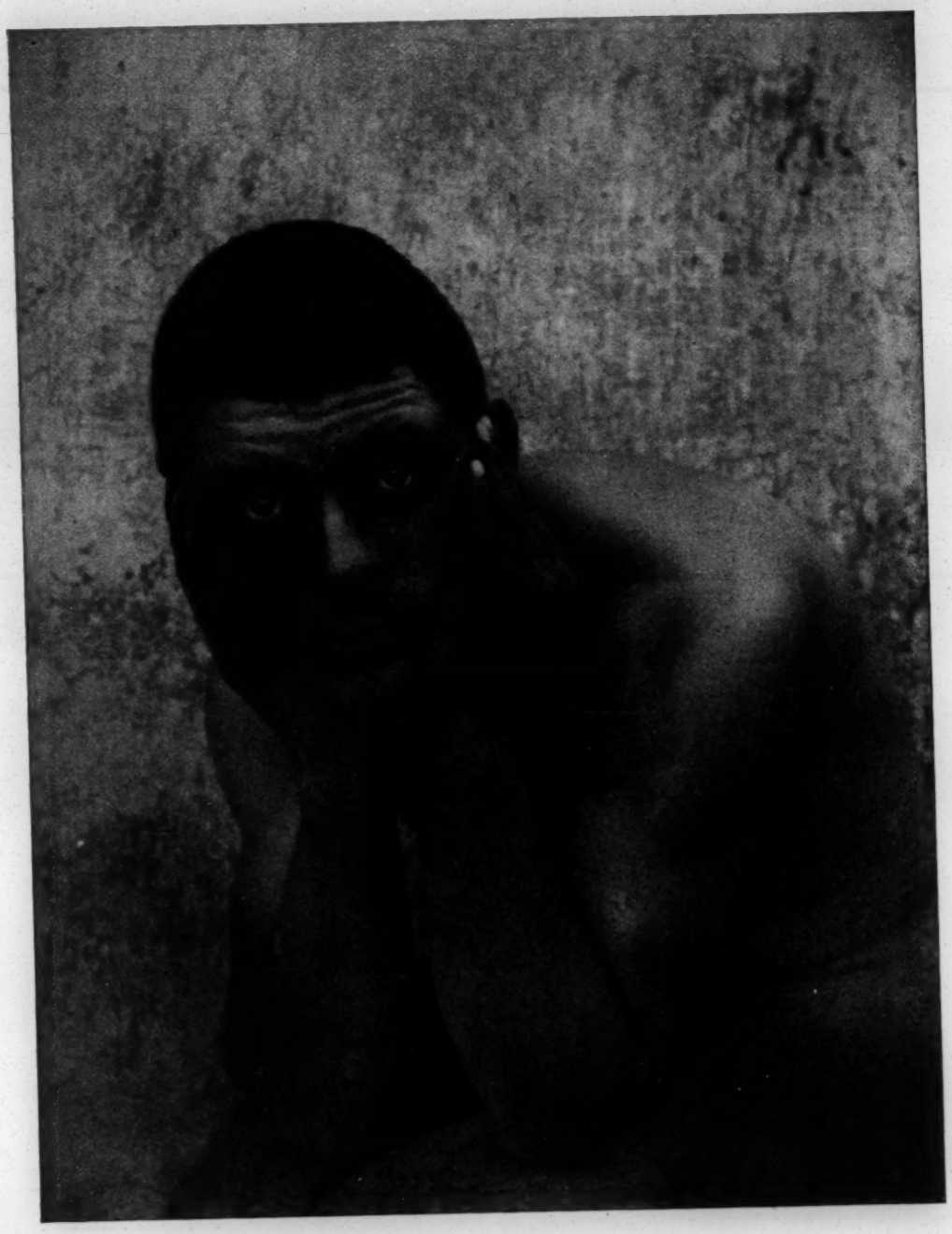
LITTLE SWEETHEARTS

LOVERS

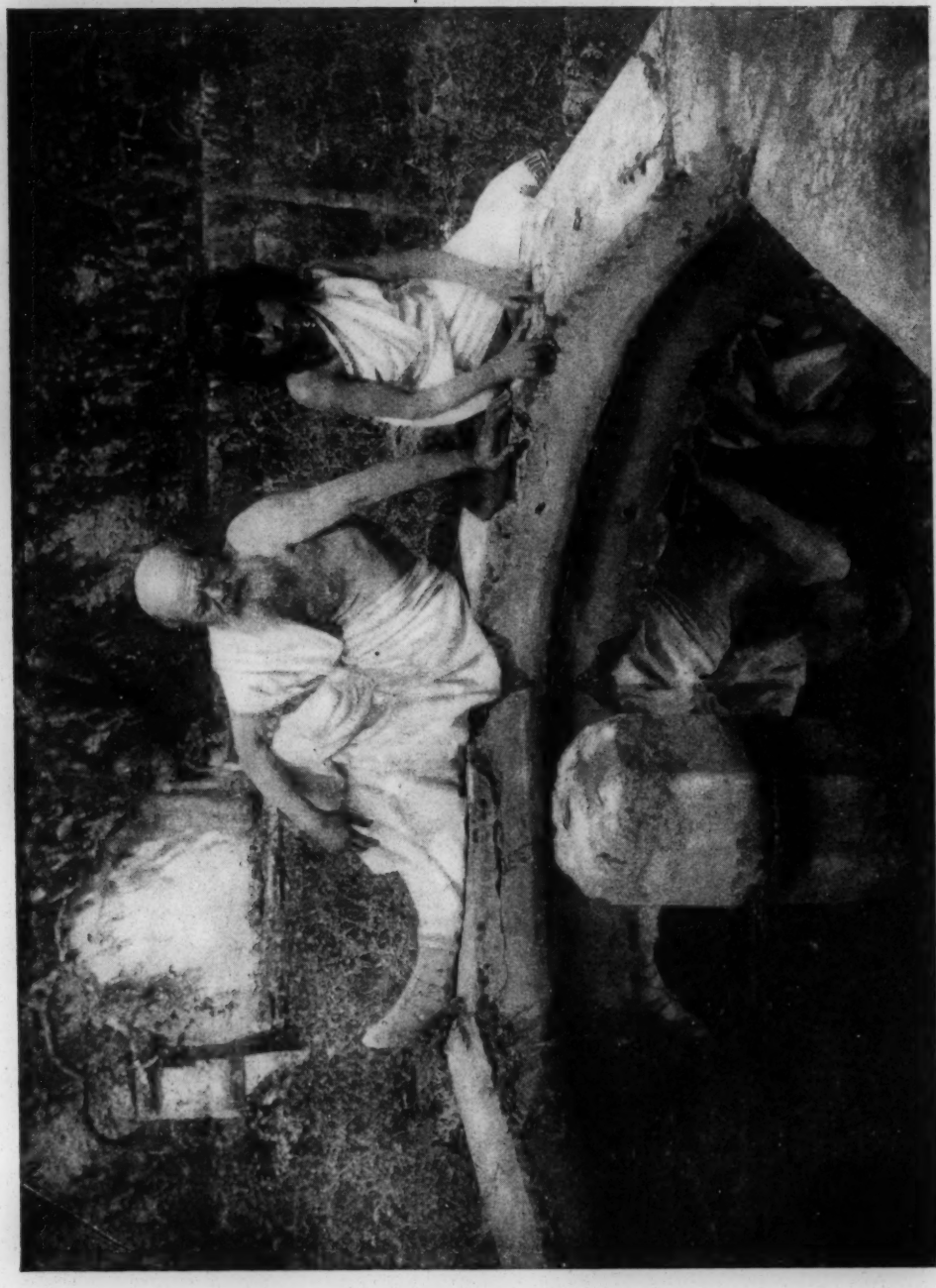


ANOTHER TYPE OF SICILIAN

In no other section of Europe can such a blend and variety of race be found as in Sicily. Perfect specimens of the Saracen, the fair-haired Norman, the Arab, the Greek and the Roman, the Carthaginian, the Crusader from many lands and of almost every ancient and modern race (excepting the yellow and Indian) may be seen on the streets of Sicilian cities.

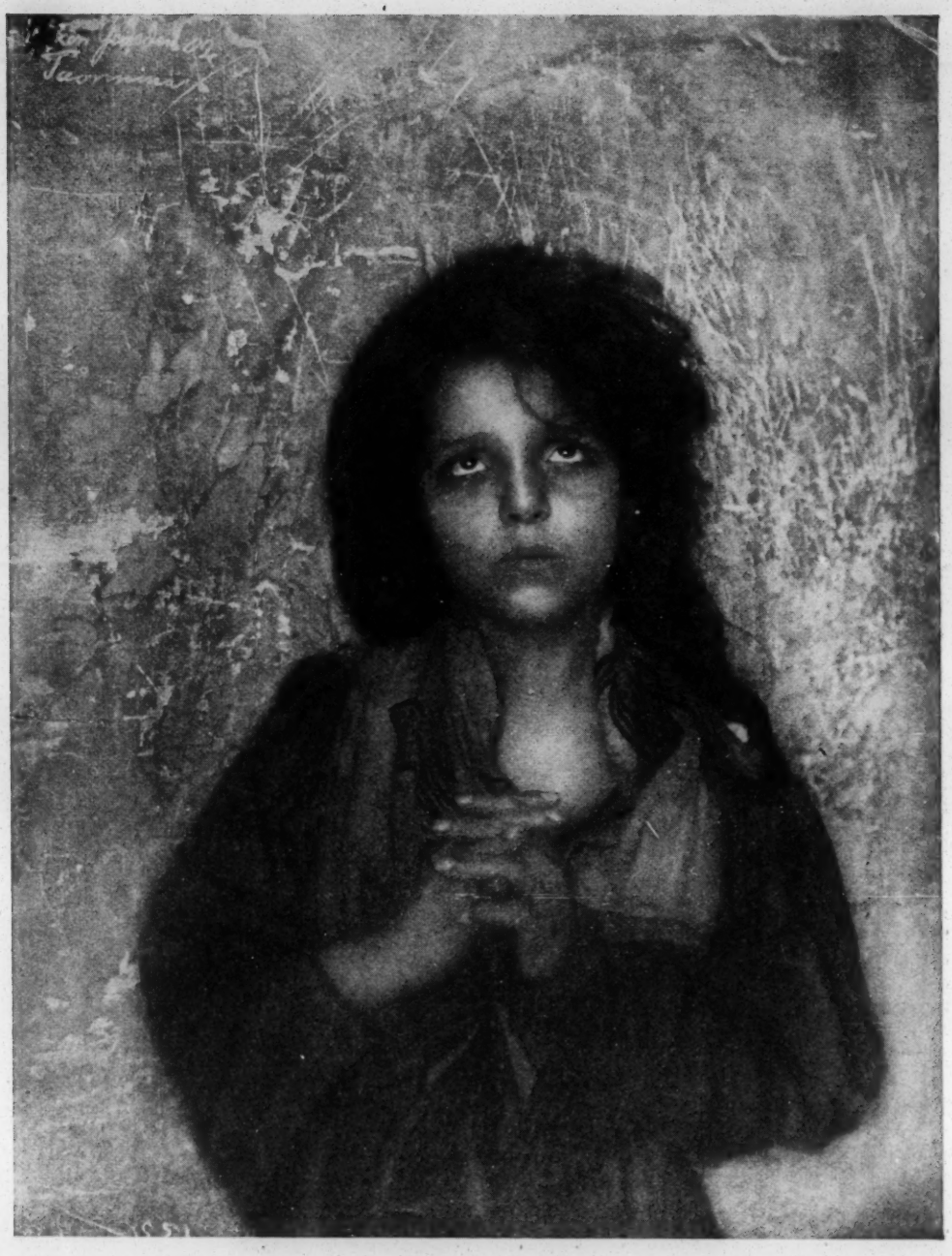


WATCHING MOUNT ETNA



IN THE PHILOSOPHER'S GARDEN

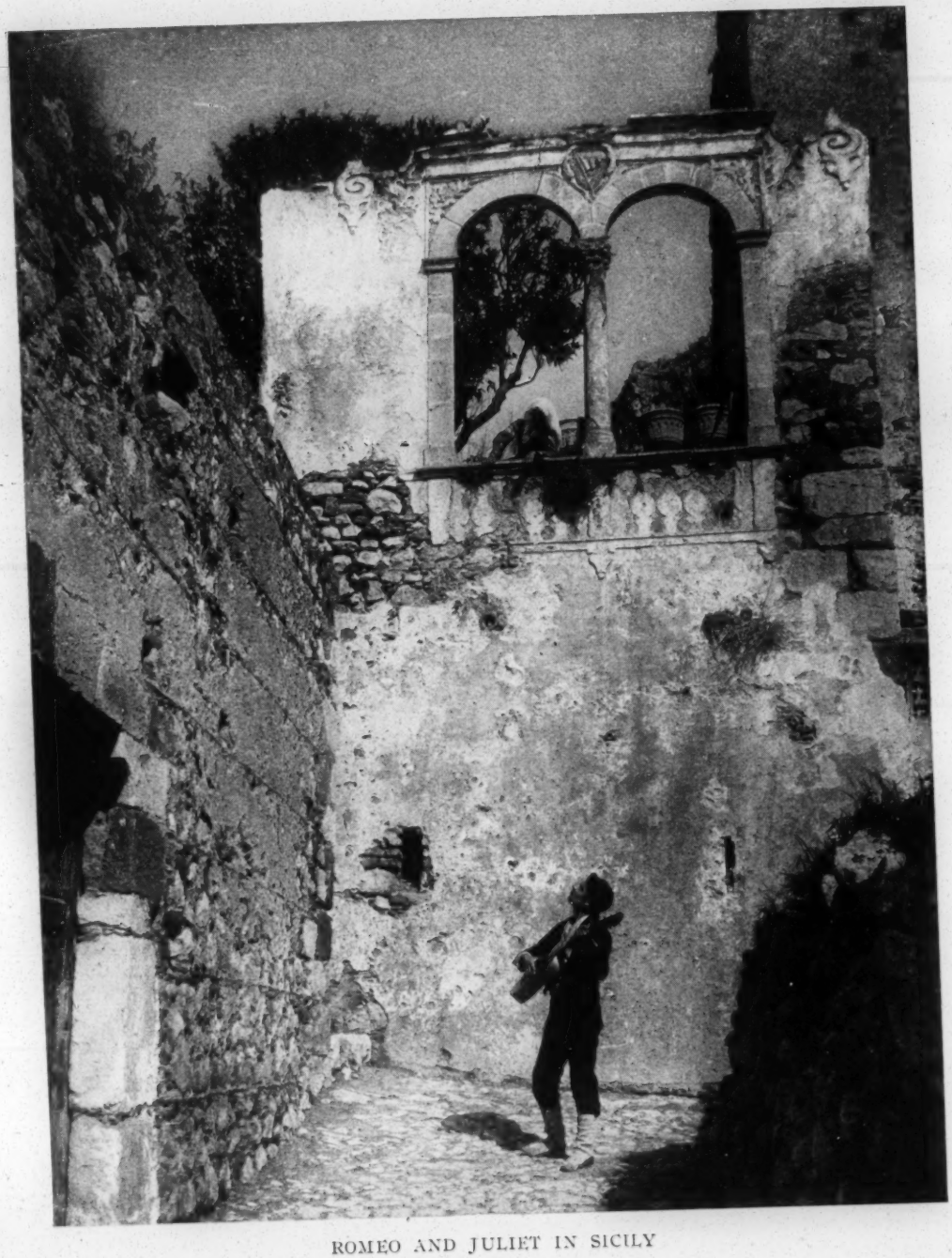
THESE SICILIAN GIRLS MIGHT ALMOST BE CALLED DAUGHTERS OF ANCIENT CARTHAGE



A MAIDEN'S PRAYER

A SICILIAN BELLE

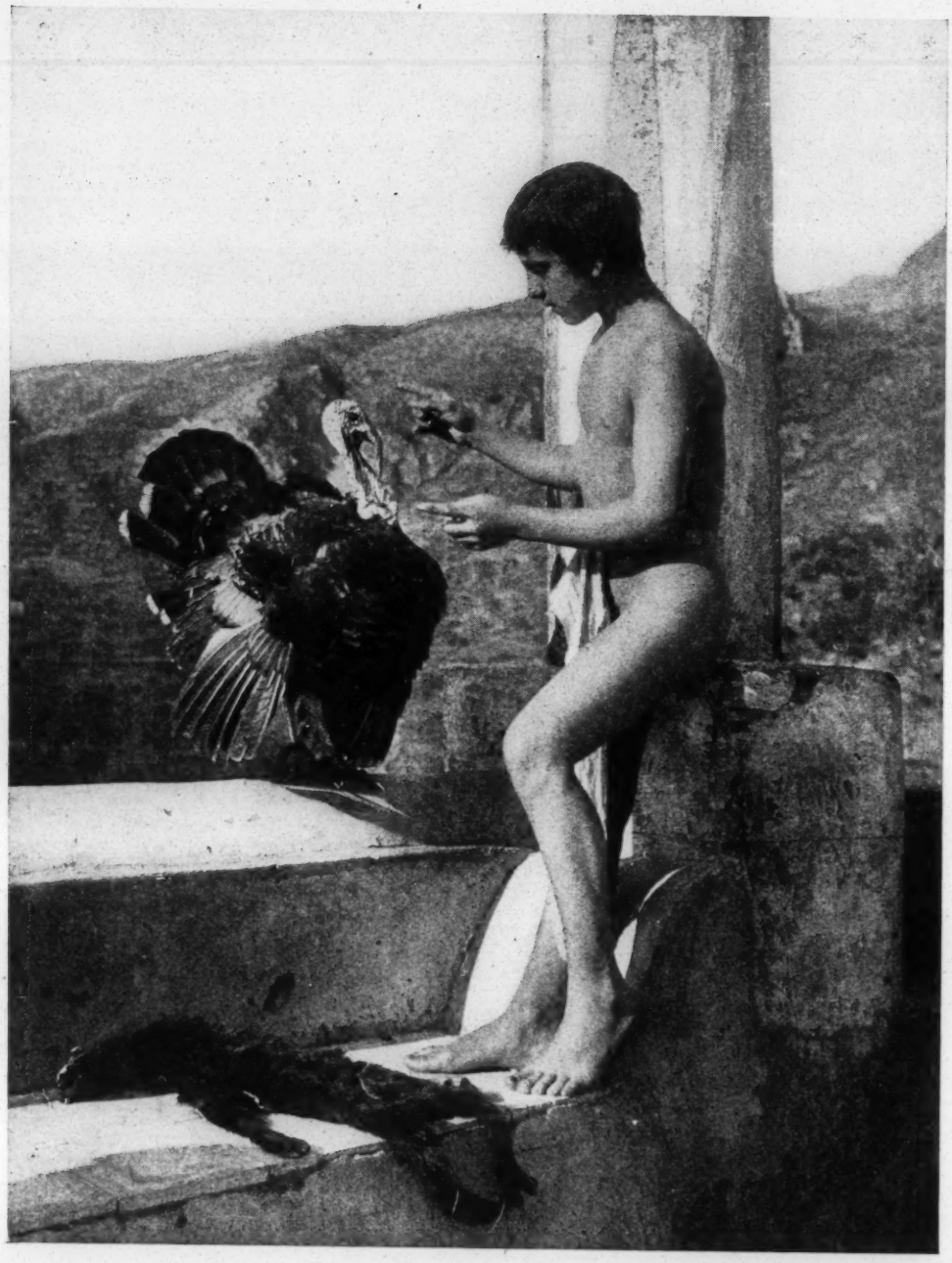
IN OLD SYRACUSE



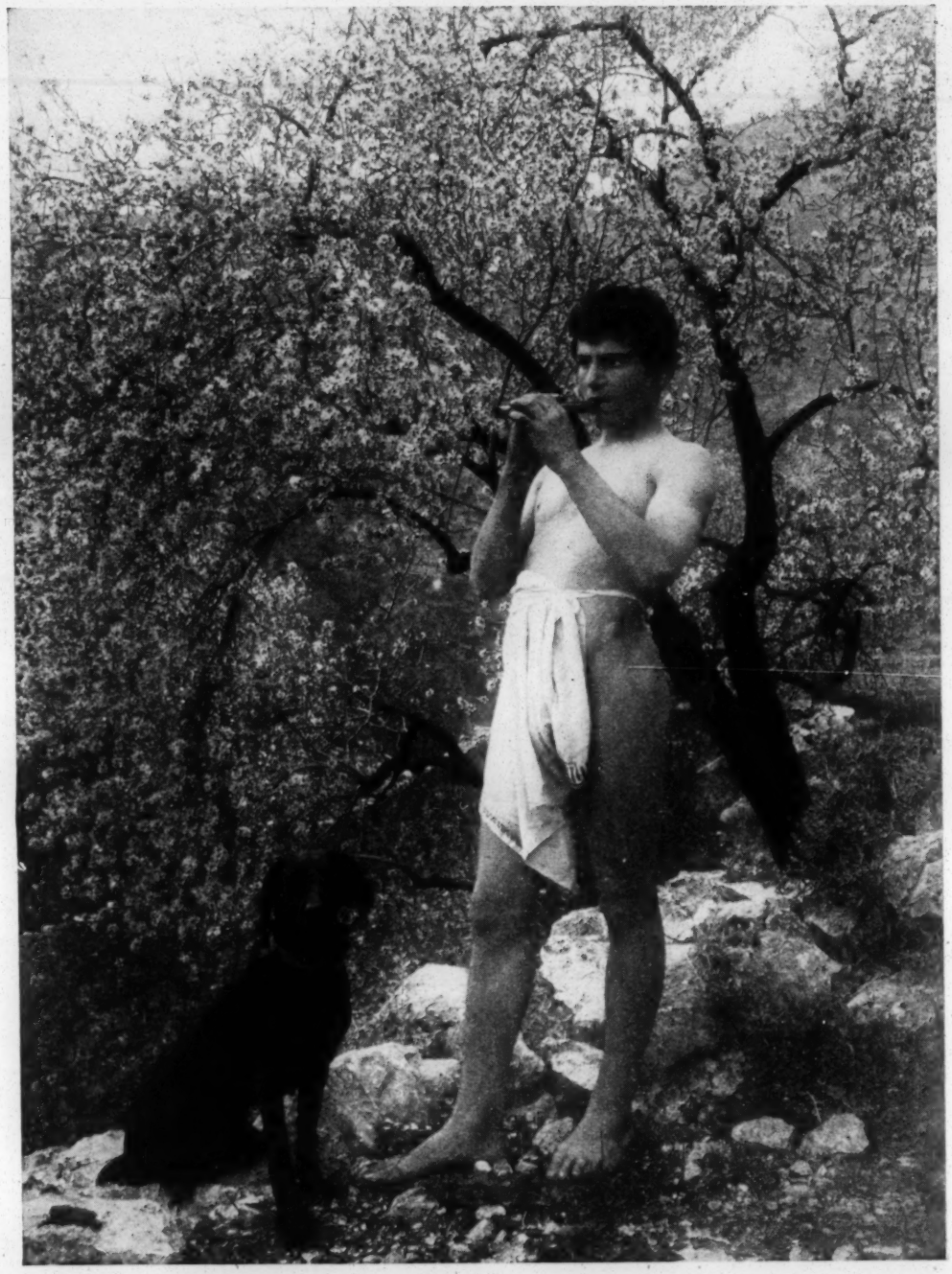
ROMEO AND JULIET IN SICILY

A SICILIAN TROUBADOUR

DREAMING: A SINGER OF OLD SICILY



SUMMER TIME IN SICILY



A SHEPHERD AND HIS LUTE UNDER THE ALMOND TREES: TAORMINA, SICILY

HAPPY HOURS IN SICILY

CHUMS

Photos by Arthur H. Warner

CALABRIAN GIRLS

A WEDDING IN CALABRIA: THE BRIDE IS IN THE CENTER

wistfully, "but mother is mother," he added, with conviction.

He thought that if he could work at his trade ten years in America he could save in that time $2,000 and with it return and buy a farm in his native land.

From Castrogiovanni one sees towering fifty miles to the eastward the cone of Mount Ætna, rising out of the valley of Catania symmetrical and majestic. One who would know Sicily should not neglect a visit to its slopes, whose volcanic soil, fresh from the inwards of the earth, grows the finest grapes of the island.

Everywhere you go among its splendid people, if merely to ask a direction or say good afternoon, you must stop and drink of their proffered wine, and you will conclude that you have again come to the wrong place to look for thieves and cutthroats.

From Sicily I passed up into Calabria, the most southerly division of the peninsula, the heel of the boot of which Sicily constitutes the toe, and, although it is geographically nearer Naples and the northern centers than the island below it, it is in fact the most isolated part of the kingdom. Communication throughout it is most difficult because of the lofty and rugged peaks of the southern Apennines, while there are few steamships and fewer railroads.

Figures compiled by the Italian government show that for the three years 1905–1907 emigration from Calabria averaged annually 394 persons for every 10,000 inhabitants—greater proportionally than from any other part of the kingdom. Of these, 385 crossed the Atlantic, and, although there are no statistics to show how many went to South and how many to North America, it is known that practically all the Calabrian emigration comes to this country.

Calabria is a region unknown to the tourist, and yet, without knowledge of Italian, an English-speaking man might get along better there than elsewhere in Italy because of the great number of emigrants returned from America with a fair knowledge of its language. These one meets with most, not in the larger cities, but in the villages, because the population of the last is made up almost entirely of agricultural laborers, and it is from this class that emigrants are made.

Take, for instance, the little village of Settingiano, a hill town which I visited one day from Catanzaro. The first man I met I addressed in Italian, but, after a sentence or two in that language, he divined my nationality and answered me in excellent English. After that it seemed to me that I must be back in America so far as the men went, so many of them came up and talked to me in English.

With the women it was otherwise. They were Italian of the primitive sort. All dressed in the beautiful old Calabrian costume and walked barefoot through the streets, carrying their big water casks to and from the fountains on their heads as if they had stepped out of another century.

That day at Settingiano was one of the pleasantest of my Italian experiences. Probably I was the first American who had ever visited the town and, interested as I was in what I saw, I was less a spectator than an exhibition. The people turned out to see me as in an American village they would for a circus, followed me about, and, in a friendly if curious spirit, tried to make my visit agreeable. By happy chance there was a wedding, which I was invited to attend, and, when I left to catch a train back to Catanzaro, four boys insisted on accompanying me a mile to the station, while one of them stopped at his home on the way and picked me an immense bunch of flowers from his garden.

I suspect my visit gave an impetus to American emigration in that town such as it never had before, but if so prepossessing and kindly a people should move their village over tomorrow, bag and baggage, I imagine we would be better rather than worse off for the arrival. All of the returned emigrants that I talked with said they were back in the old country only for a time and expected to go to the United States again when times improved.

"We're glad to be back awhile to see the old place once more," one of them explained to me, "but wait until times are good in America again and you'll see the biggest rush from Italy that has ever taken place."

Leaving Calabria and traveling north toward Naples through Basilicata, I found similar conditions. In the larger towns and among the upper classes neither our language nor our ideas are understood, but one need go no farther out of Potenza, the provincial capital, than the vineyards on the side of the hill upon which it is built to find men working in the fields who are ready to talk to you in your own language and welcome you as a friend when you tell them that you are from the United States.

Now what impressions does one get of the Italian emigrant after seeing him thus in Sicily and in the southern provinces of the mainland whence the westward stream comes?

The point that struck me first was that Italy was not overpopulated. There is an impression in this country, I know, that it is, in which I myself shared until I traveled through it and studied the figures. Italy has about 30,000,000 inhabitants, but Germany and Great Britain, with about the same area, are supporting populations in each case of twice that size and doing it better into the bargain. Besides that, the greatest density of population in Italy is to be found in the north, where prosperity is highest and emigration least.

The difference is that Italy is still trying to support her population by agriculture, whereas Germany and Great Britain have long since seen the necessity of working out their destinies through manufacture and trade.

Moreover, Italy is a backward country agriculturally, which may come as another disillusionment to many who have heard of its wonderful vineyards and olive groves, of the marvelous patience and labor that are put into reclaiming rocky slopes, and fighting inch by inch with nature for every possible bit of soil. But this is true of certain localities only. The environs of Naples, the Conca d'Oro of Palermo, the slopes of Mount Ætna are indeed examples of intense and intelligent cultivation, but, on the other hand, there is much land in south Italy wasted and misused, and great stretches, like the splendid valley along the Ionian Sea from Catanzaro to Metaponto, where they are putting in twice as much work and getting half as large a return as if that same land were in France or Switzerland.

The wooden plow is still in use in many places in Italy, and modern farm machinery is practically unknown in the south. Everything is done by hand at a tremendous expenditure of human labor, which might be more productively employed, while the use of fertilizers or the rotation of crops is not understood.

The root of the trouble is the land system. The whole of south Italy is an agricultural country, and yet one may almost say that there is not a farmer in it, as we understand the word here. There are land-owners on one hand and agricultural laborers on the other—that's all. The landlord idles away his time in the cities. Such a thing as living on the land, getting out in his shirt sleeves to work it, and hiring others to help him when necessary is unheard of. Frequently he never even visits his estate, but leaves everything to a chain of middlemen, each of whom wrings an unearned living out of the peasant below.

And the agricultural laborer? He works twelve hours each week day and frequently half of the Sabbath at an impossible wage—about forty cents a day for a man and half that for a woman—or for a miserly share of the produce, without proper tools or adequate instruction. He does not live on the land any more than its owner, but, through a habit acquired in the old days, when it was necessary to keep together for protection against outside attack and for fear of the malaria in the lowlands, he huddles with others in dirty, unsanitary towns on the hilltops, where houses are built as close together and he is as cramped for room as in the city of Naples.

The principal difference between that,

CALABRIAN GROUP

Photos by Arthur H. Warner

AT A STREET FOUNTAIN: SELTINGIANO, CALABRIA

the metropolis of the country, and a tiny Italian village is that the houses in the first have five and six stories and in the other only one or two. Living conditions are similar.

This very menace of malaria proves the backwardness of agriculture. The disease is unknown where proper drainage and thorough cultivation exist. There was no malaria in the Campagna in Roman days. It is only since the valley about the Eternal City has been allowed to fall back into disuse and neglect that it has become a breeding-place for mosquitoes and a pesthouse of disease.

The trouble with Italy, particularly the southern provinces, is that there is no middle class. You have the upper class, living in idleness and greater luxury than the nation can afford, and the peasant toilers under them, obliged to support this top-heavy fabric and an expensive army and navy besides by lives of hardship and deprivation.

There is a popular belief in America that, although wages are low in Italy, the cost of living is so much less as to make the proportion between the two much the same as with us. This is based on a misconception. A comparison of prices there and here will reveal only slight differences *provided an equal quality is obtained*. It is the *standard*, not the *cost* of living, that is lower there than here. The average American who gets the impression that Italy is a ridiculously cheap country in which to live is used to an unnecessarily high standard at home, and, going abroad, accepts unconsciously a lower one without discomfort.

As an Italian who had been in the United States said to me in a train in Sicily, "In America, cost much to live, but everything good. Down here, everything cheap, but not much good, too. Italy is a good place to live, you have money. No money, not much good."

What Italy needs is a revolution in its land system such as was begun a score of years ago in New Zealand, when John Ballance and the Progressive Party went into power. If the government could start in buying up some of the disused and misused estates in south Italy, divide them up, and rent small holding at fair figures, it would give the Italian *contadino*—thrifty, industrious, and simple man that he is—a chance to become a farmer instead of a mere farm laborer. In conjunction with this a system of agricultural schools and stations should be developed to teach him how to farm, the means of transportation should be improved, and government education should be extended so that his children may know some of the things to which his eyes are sealed.

Is such a solution to be hoped for? In the near future, it must be admitted, it is not. The present Italian government, progressive as it is in many respects, cannot be expected to take a radical stand on the land question. American ideas are helping, just as American dollars sent back by the emigrant are helping to improve conditions. The exodus of laborers has already raised wages in many sections, and the landlords are aware of the danger that has come to south Italy through the loss of thousands of its young and ablest workers. Yet little is to be expected of them, steeped in selfishness and tradition as they are, and not much more is to be expected of the peasants themselves in the lives of superstition and ignorance to which they have been reduced.

Of an Italian boy, perhaps eighteen years old, whom I met high on the slopes of Ætna I asked the name of the owner of the land upon which he was working.

"Il padrone," he answered.

"And what is the padrone's name," I continued.

He shook his head blankly. "I don't know," he answered.

The question must become a national one and be taken up by the government in a systematic and adequate way, and that will require time. New ideas are stirring in Italy. I was surprised to find the strength of Socialism there, and while I was in Italy there was a serious and bitter strike of the agricultural workers in Parma and similar disturbances in

Photos by Arthur H. Warner

POTENZA BASILICATA

BASILICATAN PEASANT'S HUT

Used as a day shelter only, the workers returning to town at night.

SICILIAN CART Photo by Arthur H. Warner

Pictures are painted on all vehicles and the horse wears a variety of charms to ward off the "Evil Eye." (See also page 1078)

Puglia, but south of Naples the vast army of the *contadini* is as yet untouched by new thought—or indeed any thought—on industrial questions.

Better conditions in Italy still appear somewhat remote, and in the meantime the outflow of laborers, once started, will continue. Those who have elected to believe that the portion of this which comes to America is "the scum of Europe" will doubtless hold to that view in spite of anything which persons who have learned to know the Italian peasant, either in this country or his own, may say to the contrary.

But it may be well to recall that the same arguments that are used against the Slavic and Italian arrivals of this day were urged with equal vehemence against the Teutonic and Celtic immigration when it had its beginnings fifty years ago. As events have already disproved these fears in one instance, so in time they may in the other.

NOTES ON TURBULENT NICARAGUA

THERE is no spot of equal area upon the globe in which so much human blood has been wasted in civil war or so much wanton destruction committed. Nature has blessed it with wonderful resources, and a few years of peace and industry would make the country prosperous beyond comparison; but so much attention has been paid to politics that little is left for anything else. Scarcely a year has passed without a revolution, and during its sixty-five years of independence the Republic has known more than five times as many rulers as it had during the three centuries it was under the dominion of Spain. It was seldom a question of principle or policy that brought the inhabitants to war, but usually the intrigue of some ambitious man. It is a land of volcanic disturb-

Photo from Mrs Harriet Chalmers Adams

METHOD OF BUILDING RAILROADS IN THE SWAMP LAND OF NICARAGUA

ance, physical, moral, and political, and the mountains and men have between them contrived to almost compass its destruction."*

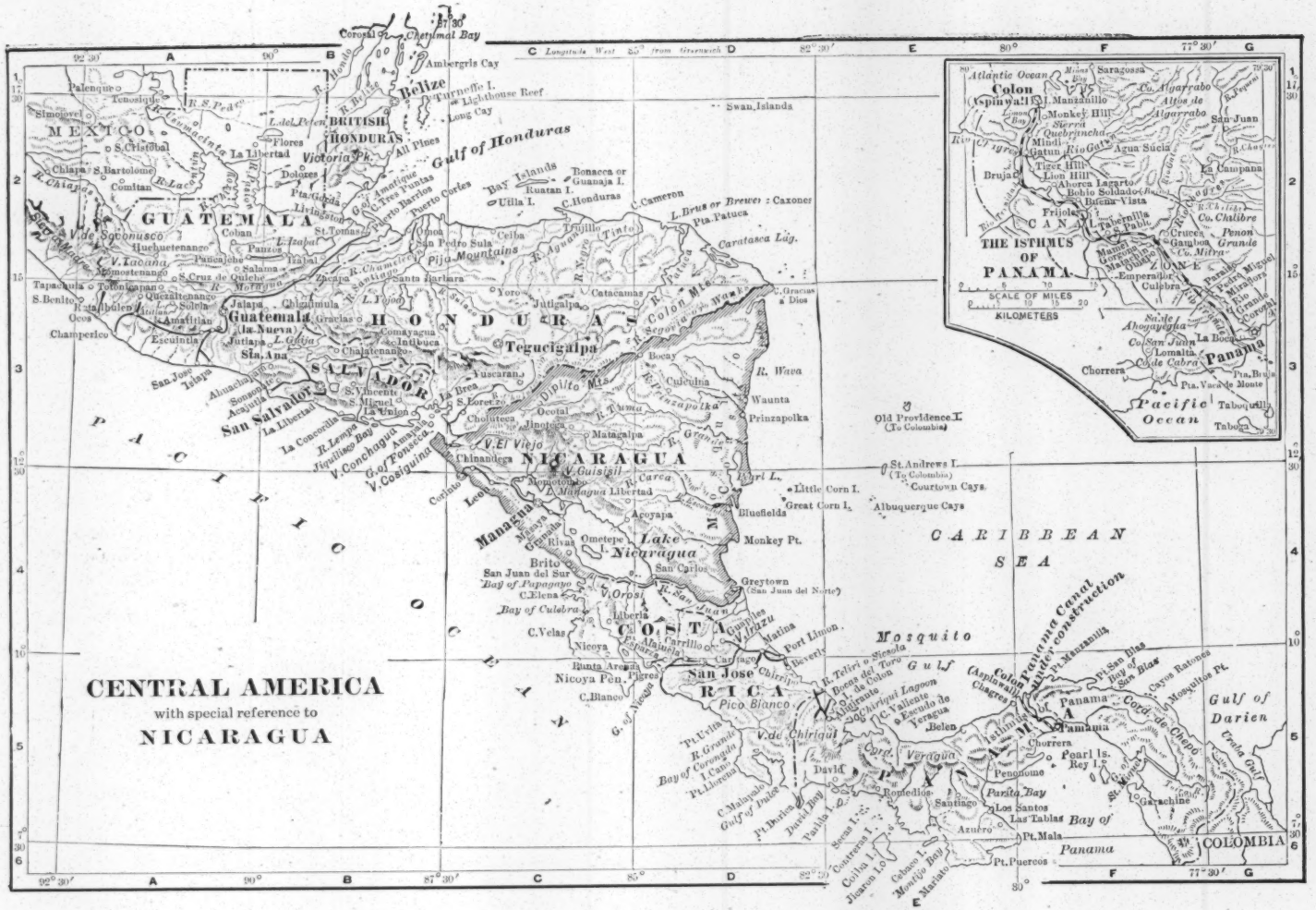
Nicaragua, the largest of the Central American Republics, extends over an area of 49,200 square miles, equal to that of the State of New York, with a population estimated at about 600,000.

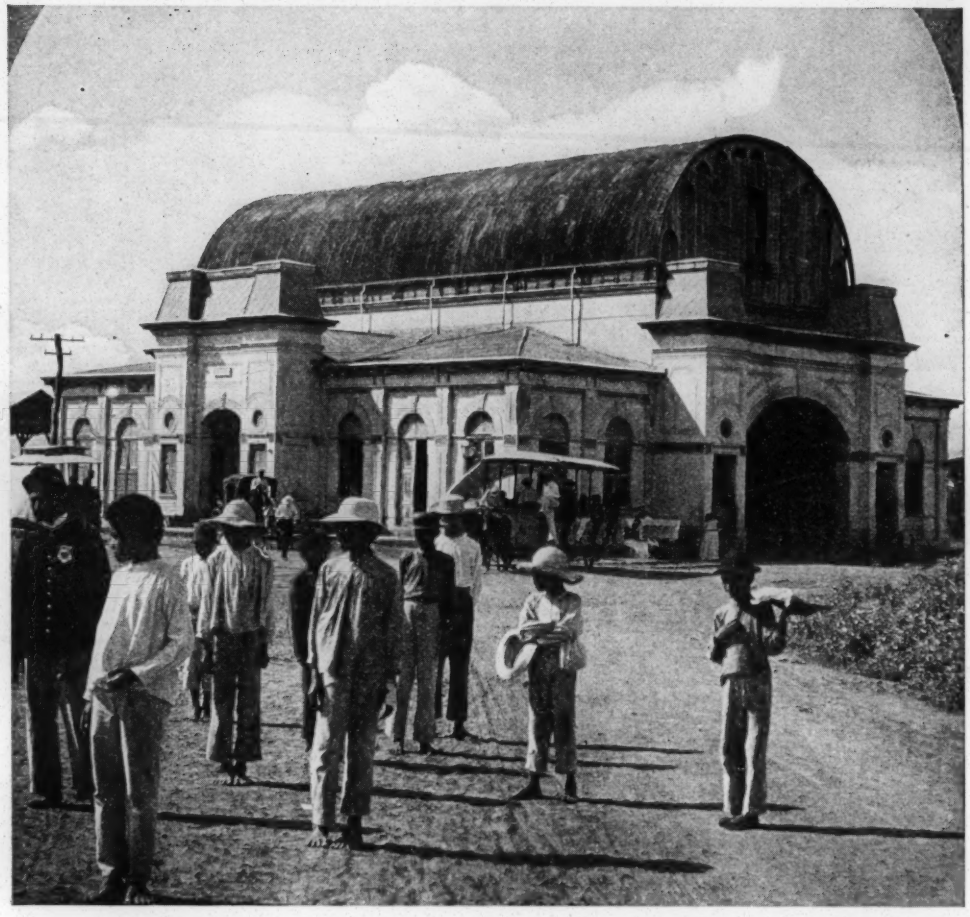
Two mountain ranges traverse its entire territory. Due to this fact it enjoys a diversity of climate, products, and soil. The fertile plateaus are extremely healthful and pleasant, but the lowlands are hot and tropical. Coffee, cacao, and bananas are the principal articles of export, but sugar cane, tobacco, cotton, maize, and wheat are successfully grown. Numerous minerals and precious metals are found in the mountains. The vast forests contain over forty different species of trees furnishing oils and extracts used for industrial and medicinal purposes—mahogany and other valuable cabinet woods.

In the depression in which are situated the picturesque lakes Nicaragua and Managua are extensive plains affording excellent pasturage for cattle, and it is in this part of the country that most of the larger cities are to be found. The east coast, commonly known as the Mosquito coast, is but sparsely settled. The Indians inhabiting the Mosquito country are noted for their unique industries, such as the manufacture of various kinds of jewelry, especially the so-called Panama gold chains, hammocks, straw hats, and pottery, all of which find a ready market.

Columbus, on his fourth and last voyage, in exploring the coast of Central America, and after touching at Cape Honduras, was driven by the stress of weather to take shelter where the coast line turns abruptly from west to south.

* From "The Capitals of Spanish-America," by W. E. Curtis


CENTRAL AMERICA
with special reference to
NICARAGUA
MEXICO
GUATEMALA
BRITISH HONDURAS
HONDURAS
SALVADOR
NICARAGUA
COSTA RICA
PANAMA
COLOMBIA
Belize
Gulf of Honduras
Swan Islands
Tegucigalpa
Guatemala
San Salvador
Lake Nicaragua
Managua
Leon
Greytown
San Juan del Norte
San Jose
Pico Blanco
Chiriqui Lagoon
Bocas del Toro
Colon
Panama
Chagres
Gulf of Darien
Caribbean Sea
Pacific Ocean
Mosquito Gulf
Old Providence I.
St. Andrews I.
Courtown Cays
Albuquerque Cays
Bluefields
Monkey Pt.
Port Limon
Pt. Manzanilla
Pt. San Blas
Bay of San Blas
Mosquitos Pt.
Cayos Ratones
Pearl Is.
Bay of Panama
Gulf of Panama
Pt. Mala
Pt. Puercos
Bay of Parita
Gulf of Montijo
Gulf of Nicoya
Gulf of Fonseca
Gulf of Amatique
Bay Islands
Ruatan I.
Utila I.
Bonacca or Guanaja I.
Swan Islands
Ambergris Cay
Turneffe I.
Lighthouse Reef
Long Cay
Old Providence I. (To Colombia)
St. Andrews I. (To Colombia)
Courtown Cays
Albuquerque Cays
Pearl Is.
Rey I.
Contreras I.
Coiba I.
Jicaron I.
Cabras I.
Morrillo Bay
Parita Bay
Azuero
Los Santos
Las Tablas
Santiago
Remedios
David
Veraguas
Chiriqui
Bocas del Toro
Almirante
Chiriqui Lagoon
Escudo de Veraguas
Valiente
Belen
Chagres
Colon
Panama
Chorrera
Pearl Is.
Rey I.
Penonome
Parita Bay
Santiago
Los Santos
Las Tablas
Azuero
Pt. Mala
Pt. Puercos
Bay of Panama
Gulf of Darien
Caledonia Bay
Mandinga Bay
Gatun Lake
Panama Canal
Panama Railroad
Colon Panama Canal under construction
Atlantic Ocean
Pacific Ocean
THE ISTHMUS OF PANAMA
SCALE OF MILES
KILOMETERS
Saragossa
Co. Algarrabo
Atlas de Algarrabo
San Juan
Monkey Hill
Sierra Quebrancha
Mindi
Gatun
Rio Gatun
Agua Sucia
Tiger Hill
Lion Hill
Bruja
Aburra Lagarto
Bobio Soldado
Buena Vista
Frijoles
Tabernilla
S. Pablo
La Campana
Co. Chalibre
Penon Grande
Co. Mitra
Gamboa
Cruces
Empire
Culebra
Paraiso
Pedro Miguel
Miraflores
Rio Grande
Lorenzo
Sainte Ahoguegina
Co. San Juan
Lomalia
La Boca
Panama
Co. de Cabra
Chorrera
Pta. Vaca de Monte
Pta. Brujas
Taboguilla
Taboga
Pacific Ocean



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GOVERNMENT RAILWAY STATION: GRANADA, NICARAGUA

Granada is the southern terminus of the railway system of Nicaragua, which amounts altogether to about 150 miles, connecting the Pacific port of Corinto with Leon, Managua, and Granada. The public roads are very bad at all times and in the rainy season are impassable. There are steamers on Lakes Managua and Nicaragua, and also flat-bottomed steamers on the San Juan River between Lake Nicaragua and Greytown (San Juan), on the Mosquito Gulf. Thus there is steam communication by rail and water between Corinto on the Pacific and Greytown on the Atlantic side. The station at Granada is a very attractive structure and would be creditable to any city of its size. The present population is 20,000.

This point, which he named Cape Gracias a Dios (Thanks to God), is in Nicaragua, and it has retained ever since the name given by Columbus. On September 25, 1502, he landed and took possession of the country in the name of the Spanish Crown.

In 1524 Hernandez de Cordoba was dispatched from Panama to bring the country under subjugation. This he did, defeating the Indians and making several settlements. Some years prior to this Gil Gonzalez had explored the country, and had discovered Lake Nicaragua. In 1570 Nicaragua became a part of the captain-generalcy of Guatemala.

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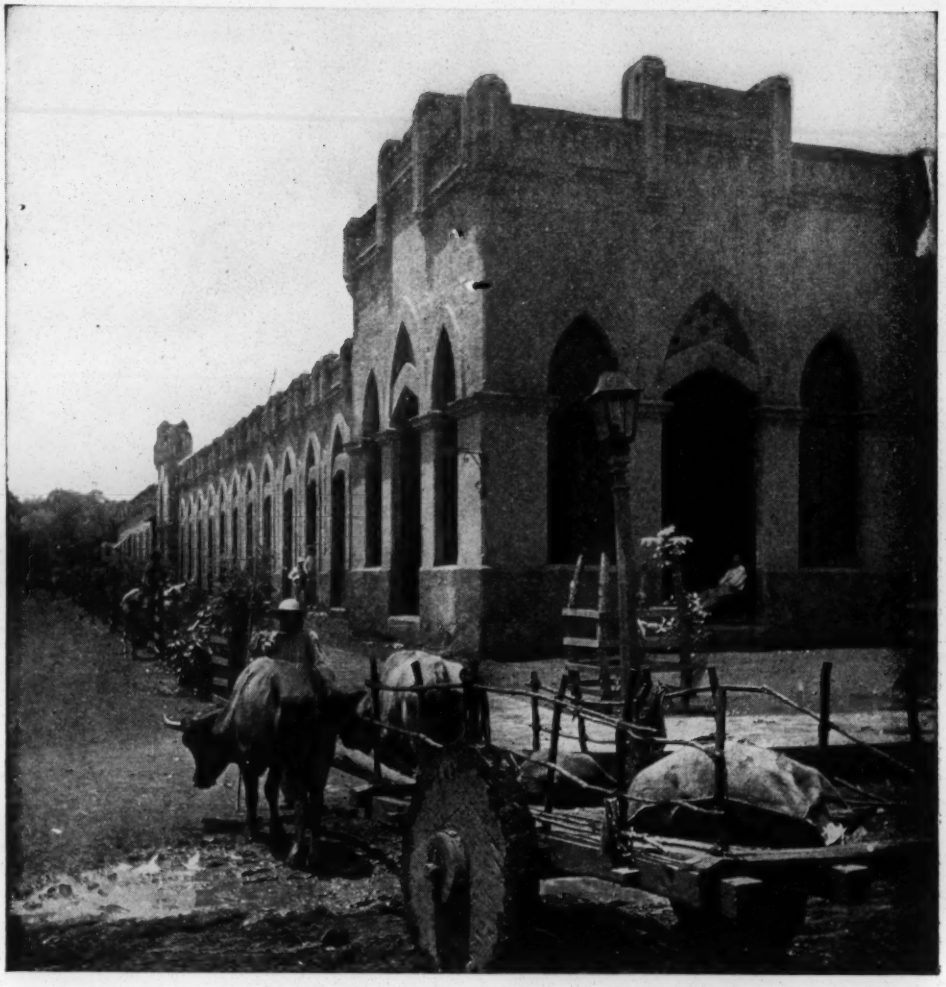
THE SMOKING TERROR: MOMOTOMBO VOLCANO, NICARAGUA

Nicaragua possesses more volcanoes than any other country of its size. The chain of volcanoes extending along the western coast contains many which have been active in recent times, perhaps the most famous being Coseguina at the tip of the peninsula opposite Salvador. This volcano, after slumbering for centuries, suddenly burst into activity in 1835, covering the country with a pall of dust and smoke for four days. The dust fell over 1,500 miles of land and water extending all the way from Jamaica, in the West Indies, to Bogota, in South America.

Among the numerous invasions which Nicaragua, together with other Central American States, suffered during the sixteenth and seventeenth centuries, those of Sir Francis Drake and Henry Morgan are the most noteworthy. In 1740 the British invaded the Mosquito coast, and, establishing friendly relations with the warlike Misskito or Sambos Indians, who had never submitted to the Spanish invaders, took possession of that part of Nicaragua. They retained possession of this territory until the year 1786, when, by a treaty with Spain, it was exchanged for what is now known as British Honduras, or Belize, and the land was restored to Spain. The Mosquito Indians subsequently acknowledged the sovereignty of Nicaragua.

On the 15th of September, 1821, the independence of the Federacion de Centro-America having been declared in



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THE PICTURESQUE CITY MARKET: MASAYA, NICARAGUA

Masaya, nine miles west of Granada, is near the little Lake Masaya, at the foot of the volcano of the same name. Into the crater Friar Blas, of Castile, in 1534, tradition states, lowered a bucket, that he might draw up molten gold. The bucket melted as it touched the lava, and the monk wrote: "One cannot behold the volcano without fear, admiration, and repentance of his sins; for it can be surpassed only by the eternal fire."

The place is peopled mostly by Indians, about 15,000 in number. Volcanic ash forms the soil of the vicinity, which is very fertile and is planted chiefly with tobacco. Its manufactures were formerly noted throughout Central America, and are still of considerable importance—hammocks, cordage, straw hats and other articles of Indian workmanship.

In the market are sold the products of the orchards, fields and factories. We are most interested in the luscious fruits and the announcement of the women who sell them; it is translated:

"I have oranges, papayas, jocotes,
Melons of water, of gold, and zapotes,
Will you buy?"

Photo from Mrs Harriet Chalmers Adams

MARKET STREET: GRANADA, NICARAGUA

Granada lies a mile or more from Lake Nicaragua with which it is connected by tramway. The country around Granada is extremely lovely; and Lake Nicaragua, the largest body of fresh water between Lake Michigan and Lake Titicaca, in Peru, is frequently pronounced the most beautiful lake in the world. The mountains of Nicaragua and Costa Rica soar on all sides of the lake, and within it rise the twin volcanoes of Ometepe and Madera.

Guatemala City, Nicaragua became a State of the Federation, and with it, in the year 1822, a part of Iturbide's Empire of Mexico. With the fall of the empire it again formed part of the Federation.

Upon the dissolution of the Federation Nicaragua declared its absolute independence on April 30, 1838, and the constitution of the Republic of Nicaragua was formally proclaimed on November 30 of the same year.

Gen. José Santos Zelaya was inaugurated President on April 17, 1906.

In 1906, the latest year for which commercial details are available, Nicaragua's foreign trade aggregated $7,639,877.53, exports accounting for $4,231,047.88 and imports for $3,408,829.65. The United States, England, Germany, and France are the leading factors in this commerce, receiving and furnishing the following amounts:

Exports: United States, $2,492,485; England, $452,142; Germany, $458,718; France, $480,502.

Imports: United States, $1,914,961; England, $776,133; Germany, $400,389; France, $193,661.

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BRONZED-COLORED MAIDENS ASSORTING COFFEE: NICARAGUA

Coffee is the principal agricultural product of Nicaragua, as of other Central American states

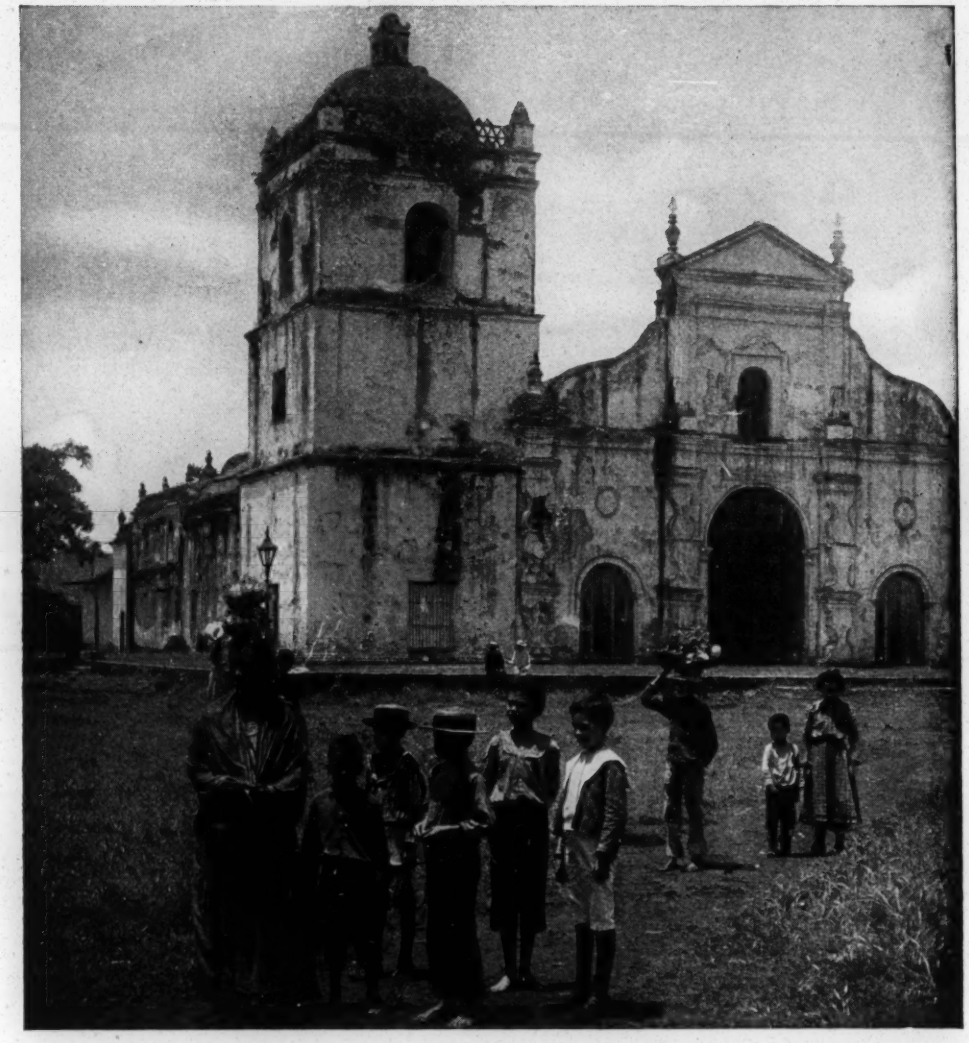
Coffee constitutes the leading item of export, 19,378,216 pounds being shipped in 1906, valued at $1,375,679. Bananas occupy second place, with 1,401,595 bunches, valued at $700,069; followed by gold bullion, $527,423; gold amalgam, $343,546; rubber, $385,472; mahogany, $284,320; cattle, $133,044; hides, $120,367; cocoanuts, $90,953; silver coin, $44,220; sugar, $23,467; and cedar, $41,465.

Agriculture and mining are the principal sources of national wealth. The area under cultivation has increased in recent years, the chief product being coffee. Nicaraguan coffee is of superior quality, and commands good prices, the finest plantations lying in the western districts. In Matagalpa and Jinotega the crops are worked by colonies of Americans and Germans, who apply the natural water-power of the country to the operation of such machinery as is required.

Bananas are grown in large quantities in the Bluefields region and shipped to New Orleans. A tract of land about 15,000 acres in extent, growing 100,000 banana plants, is one of the recently granted concessions on the Atlantic coast, and another more extensive grant of land

Photo from Mrs Harriet Chalmers Adams

THE WAY ONE LANDS AT CENTRAL AMERICAN PORTS



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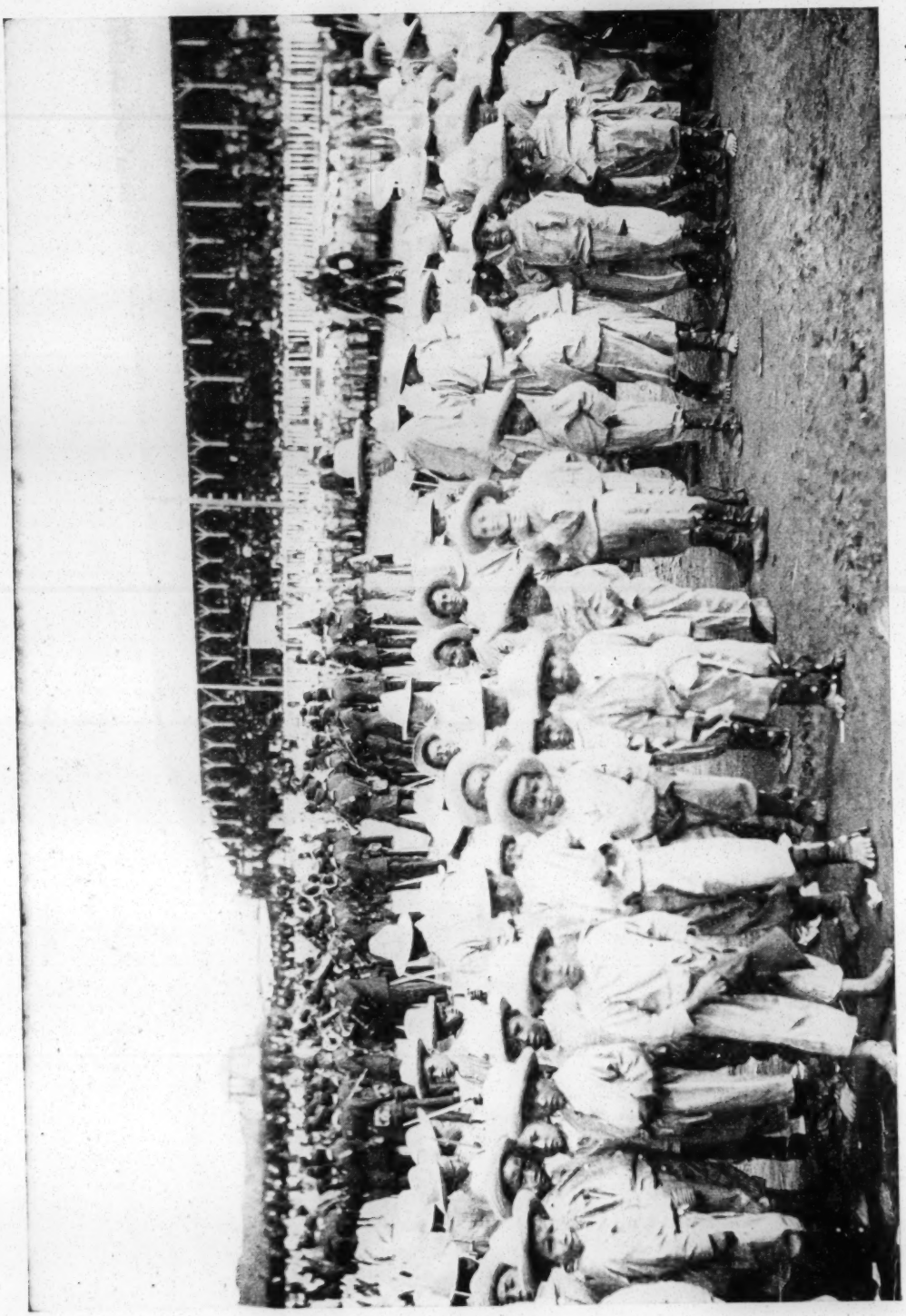
AN ARCHITECTURAL MONUMENT TO THE INTREPID AND ZEALOUS OLD MONKS OF THE CONQUEST: MASAYA, NICARAGUA

is to be opened up on the west coast. The cost of planting and maintaining 200 acres with 35,000 plants is about $4,000.

The hydrographic system of Nicaragua is very extensive, and its numerous rivers, together with its large lakes, give excellent facilities for transportation and communication.

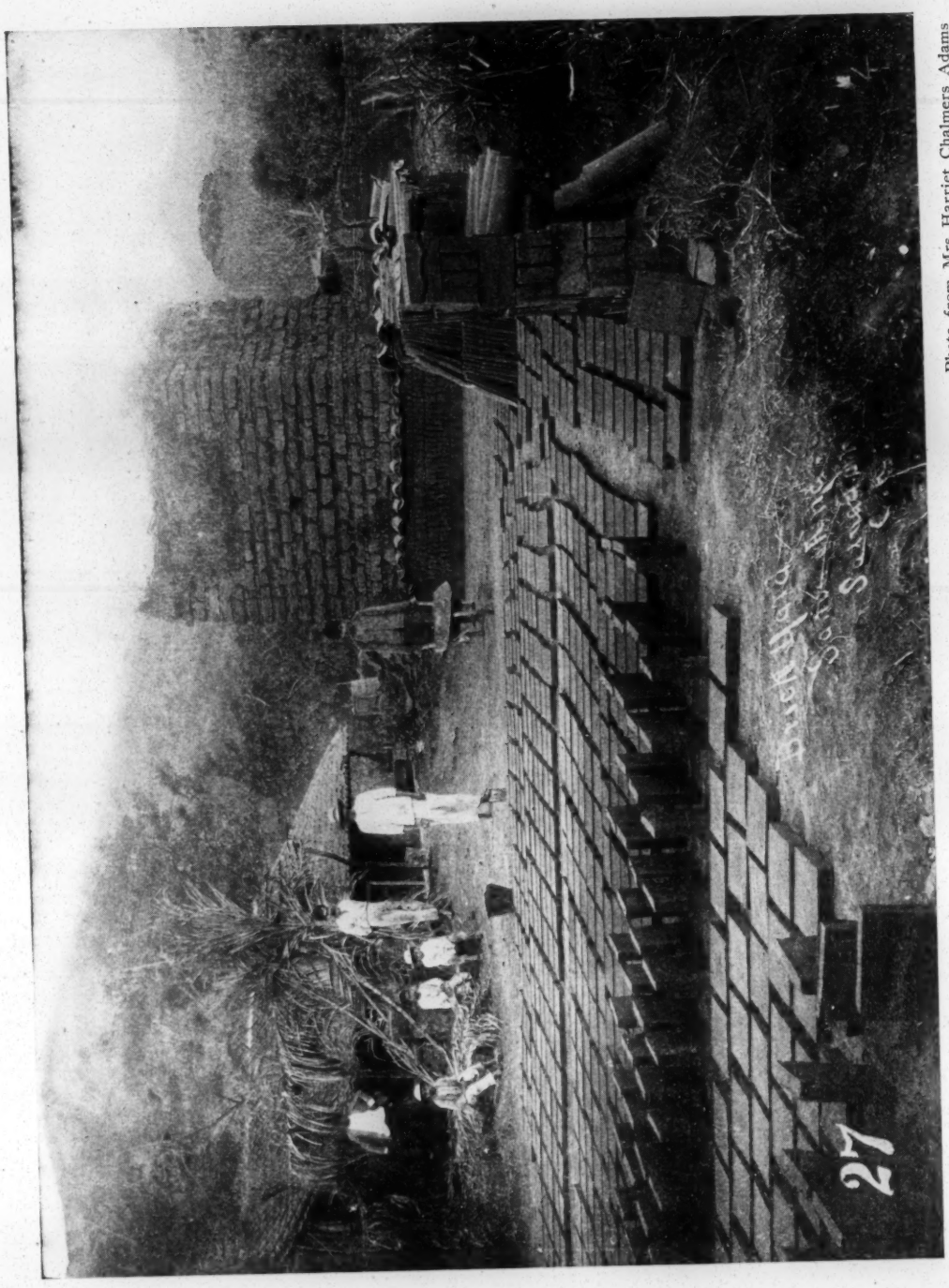
The most important of these is the river San Juan, which has a total length of 140 miles, flowing into the Nicaragua Lake, and by means of which communication is established with the important cities in that region, as well as with the capital itself. A regular triweekly steamship service is maintained on the San Juan River between San Juan del Norte, at the mouth, and the city of Granada, on Lake Nicaragua. From Granada a railway extends to Managua, Leon, and the Pacific port of Corinto.

The river Wanks, or Segovia, is navi-



SCHOOL CHILDREN OF GUATEMALA

Photo from Mrs Harriet Chalmers Adams



MAKING SUN-BAKED BRICKS: SALVADOR Photo from Mrs Harriet Chalmers Adams

Photo from Mrs Harriet Chalmers Adams

COFFEE TREE IN FLOWER: NICARAGUA

Photo from Mrs Harriet Chalmers Adams

COFFEE TREE WITH BERRIES: NICARAGUA

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WATER VENDER AND OX CART: LAKE MANAGUA, NICARAGUA

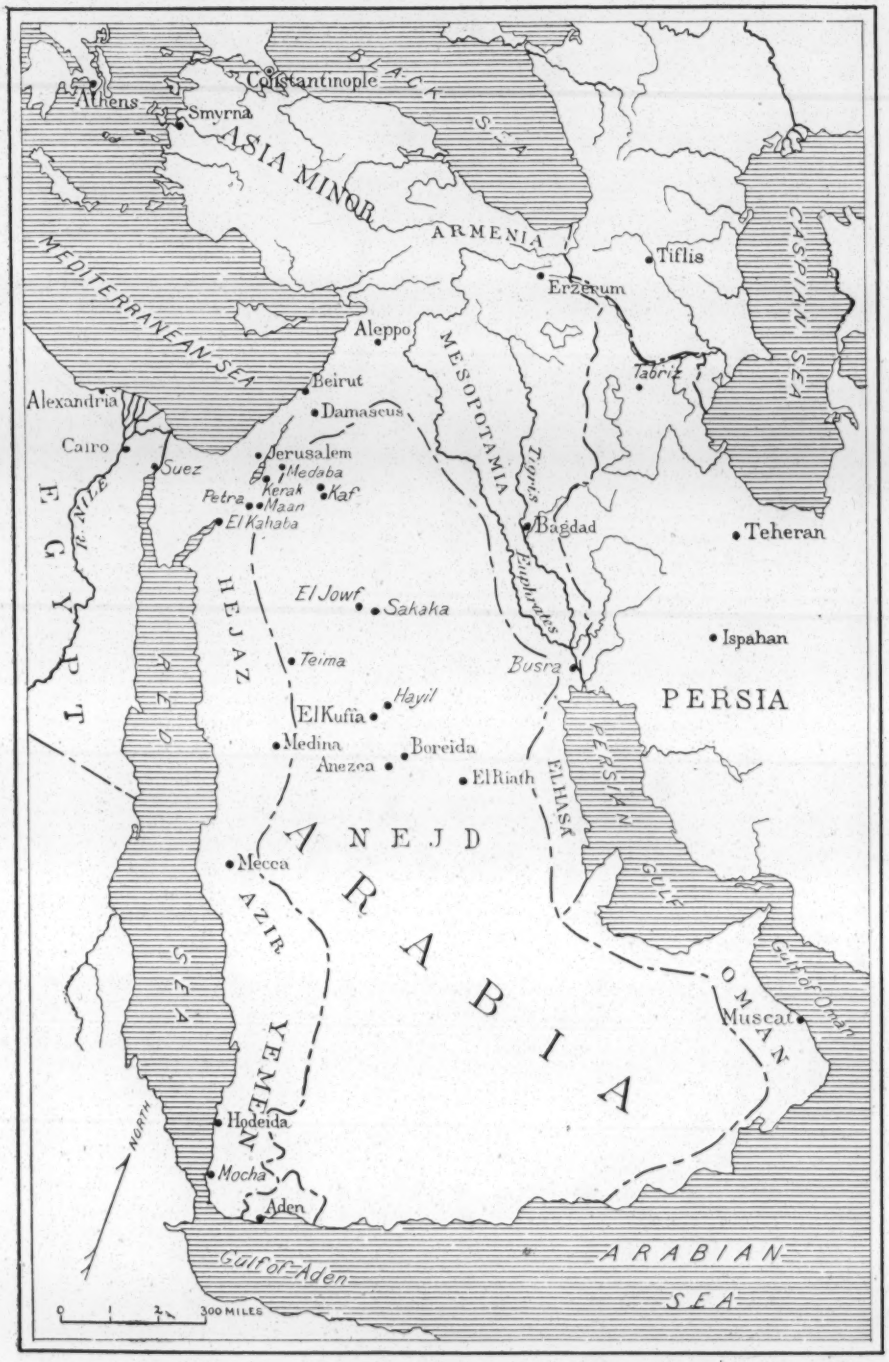
Managua was chosen for the capital of Nicaragua in 1855, after a long-continued rivalry between Leon and Granada for the distinction. It is situated on Lake Managua and has a population of about 25,000.

gable for some 240 miles, the last 110 miles of which, however, are only navigable for vessels of light draft.

Lake Nicaragua has an extension of 96 by 40 miles, is navigable throughout for large vessels, and contains a number of islands, of which the island of Ometepe, 12 miles in length, is the largest. It is one of the prettiest and most picturesque lakes of America and the largest in Central America.

Lake Managua, situated but a short distance from Lake Nicaragua, with which it is connected by the Tipitapa River, is 38 miles long and from 10 to 16 miles wide, and is likewise navigable. The capital of the Republic, Managua, as well as a number of smaller towns, are situated on its shores.

Post-offices number 135, and telegraph wires have an extent of 3,150 miles. The United States Government has installed a wireless telegraph station, with a range of over 500 miles, at Swan Island, off the coast of Nicaragua, and the United Fruit Company has a station at Bluefields.



OUTLINE MAP OF ARABIA (SEE PAGE 1039)

NATIONAL GEOGRAPHIC SOCIETY

Wednesday, 7.30 p. m., December 15—Annual Banquet.

Friday, 8.15 p. m., December 17—"The Untamed Girdle of Palestine." Mr Ellsworth Huntington, of Yale University. A two weeks' expedition on the Dead Sea with a canvas boat, a trip to the famous Rock City of Petra, by way of the desolate Ghor, and an excursion to the little-known Negen, south of Beersheba. Illustrated.

Friday, 8.15 p. m., January 7—"Manchuria; the Antung Mukden Railway; the funeral of the late Empress Dowager, November 9, 1909." Miss Eliza R. Scidmore, author of "China—the Long Lived Empire," "Jinrikisha Days in Japan," etc. Illustrated.

Friday, 8.15 p. m., January 14—Annual meeting. Address by Mr John Barrett, Director International Bureau of American Republics. Illustrated.

Friday, 8.15 p. m., January 21—"The Life of the Nest; Studies of the Nesting Habit of Birds." Frank M. Chapman, author of "Camps and Cruises of an Ornithologist," "Bird Studies with a Camera," etc. Illustrated.

Friday, 8.15 p. m., January 28—"The Ottoman Empire." Rear Admiral Colby M. Chester, U. S. Navy. From June, 1908, to May, 1909, inclusive, Admiral Chester lived in Constantinople or was traveling throughout Asia Minor. He was thus a witness of the revoluton and of the beginning of the new era in Turkey. Illustrated.

Friday, 8.15 p. m., February 4—"Mountaineering in a New Switzerland." Professor Charles E. Fay, of Tufts College, formerly President American Alpine Club. Illustrated by personal experiences and views gathered during sixteen seasons passed by the lecturer in the Canadian Rockies and Selkirks.

Friday, 8.15 p. m., February 11—"The Waterways of Empire." Mr. Willis Fletcher Johnson, Associate Editor of New York Tribune. An account of the part which rivers, canals, and other narrow waterways have played in the political and commercial history of the world, and especially of this country. Illustrated.

Friday, 8.15 p. m., February 18—"The Glaciers of Alaska; an Account of the National Geographic Society Expedition to Alaska in 1909." Professor Lawrence F. Martin, of the University of Wisconsin, and, with Professor Ralph S. Tarr, of Cornell University, leader of the Society's Expedition. Illustrated.

Friday, 8.15 p. m., February 25—"The Panama Canal." It is hoped that official duties will permit Colonel George W. Goethals, Chief Engineer of the Panama Canal, to accept the invitation of the National Geographic Society to address the Association on this subject.

Friday, 8.15 p. m., March 4—"Physical Problems of Our Country." Mr Gifford Pinchot, Chief of the U. S. Forest Service. Illustrated.

Friday, 8.15 p. m., March 11—"The Waste of Human Life and Resources in the Mining Industry." Mr Joseph A. Holmes, of the U. S. Geological Survey. Dr Holmes will tell of the Government's efforts to stem the tide of fatalities in which the United States leads the world at a ratio of three to one and the Government's efforts to devise ways of saving the great waste not only of human life but of our coal, gas, and other mineral resources. Illustrated.

Friday, 8.15 p. m., March 18—"A New Era for the South." Dr Charles W. Stiles. The speaker will describe the methods by which science and money hope to eradicate the hookworm or "lazy germ."

Friday, 8.15 p. m., March 25—"The Spirit of the West." Mr C. J. Blanchard, of the U. S. Reclamation Service. The wonderful agricultural development of the West since the work of irrigation was started by the Government and private enterprise. Illustrated and moving pictures.

Friday, 8.15 p. m., April 1—"Patagonia to Paraguay—or the Story of Argentine." Mrs Harriet Chalmers Adams. Illustrated.

Friday, 8.15 p. m., April 8—"The Pearl Fisheries of Ceylon." Dr Hugh M. Smith, Deputy Commissioner, U. S. Bureau of Fisheries. Illustrated.

Friday, 8.15 p. m., April 15—"Nearest the South Pole." Lieutenant E. H. Shackleton. Illustrated.

Waltham Watches At The North Pole

"WHERE ACCURATE TIME WAS THE ESSENTIAL FEATURE"

On board the Roosevelt and the Sled which reached the Pole

HAMPTON'S MAGAZINE
66 WEST 35TH ST.
NEW YORK

CABLE ADDRESS
HAMPZINE

November 20th, 1909.

WALTHAM WATCH COMPANY,
Waltham, Mass.

Gentlemen: Waltham Watches were used during my expedition in connection with the simultaneous tide observations at Cape Sheridan, Cape Columbia and Cape Bryant, *where accurate time was the essential feature.* They were also taken on sledge expeditions north over the ice.

Watches were distributed to different supporting parties, and were used for time comparisons by the parties up to the point where Marvin returned in command of the third supporting party.

As further simultaneous tide observations were contemplated between Cape Sheridan and Cape Morris Jesup—the most northern point of Greenland—Marvin took with him the five Waltham Watches in the party for this purpose, the object being that comparison of the five different watches might give us absolute certainty of correctness of our time.

The performance of the watches in connection with the tide observations was entirely satisfactory.

Very truly yours,

(Signed), R. E. PEARY.

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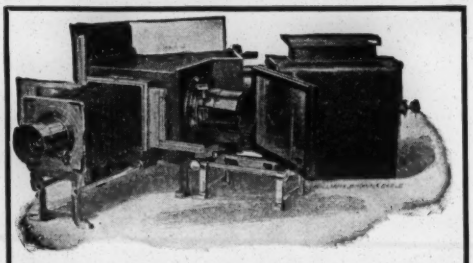

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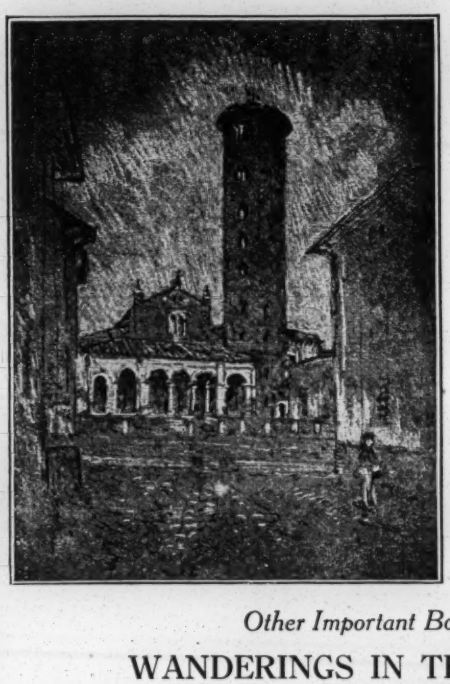

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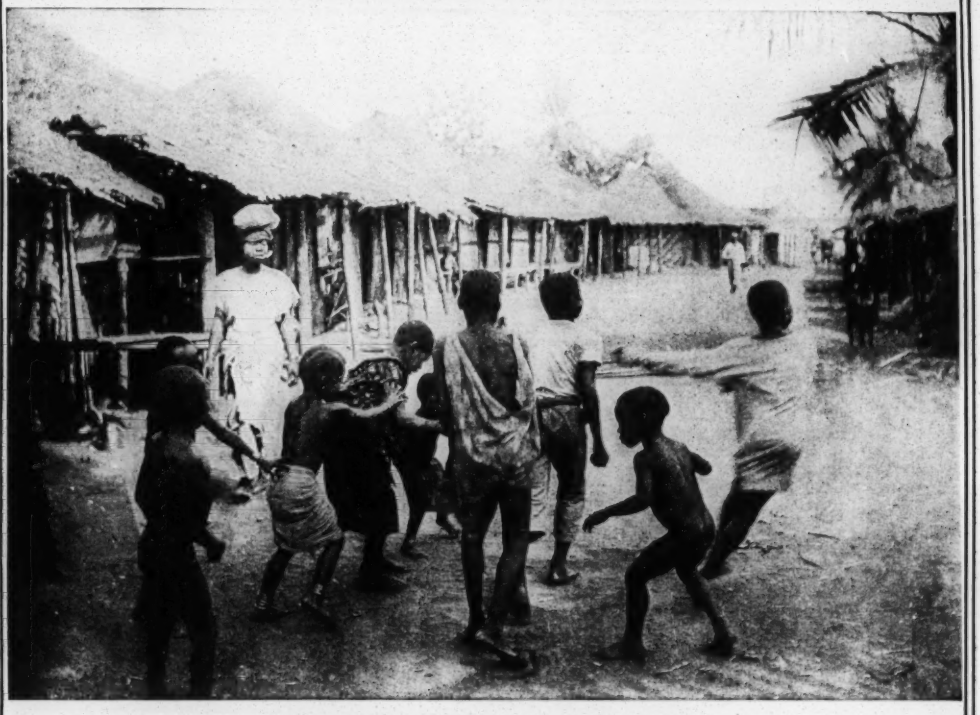

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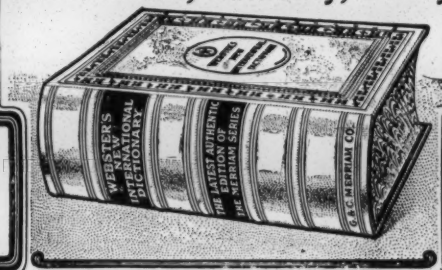

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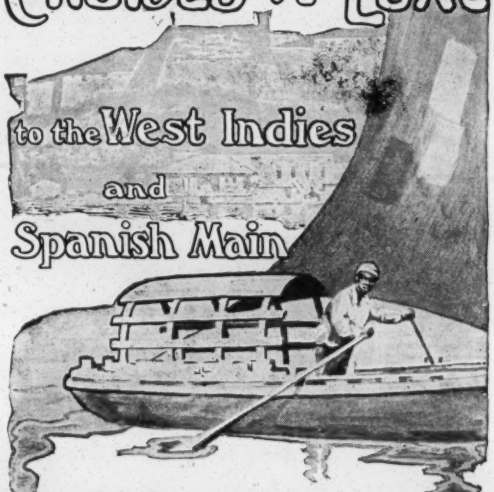

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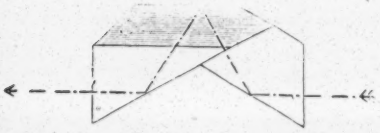

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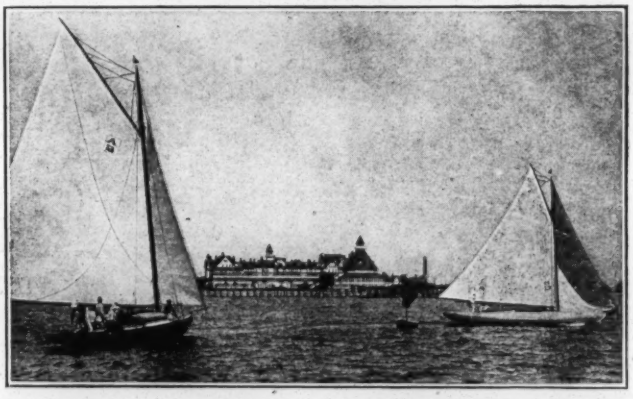

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CONTENTS

	Page
The Buried Cities of Asia Minor; by ERNEST L. HARRIS, American Consul General to Smyrna	1
Lessons from China	18
The Value of the United States Forest Service	29
The Emancipation of Mohammedan Women; by MARY MILLS PATRICK, Ph. D., President of the American College for Girls at Constantinople	42
Sunshine in Turkey; by HOWARD S. BLISS, President Syrian Protestant College at Beirut	66
Honors to the American Navy	77
Sicily, the Battlefield of Nations and of Nature; by Mrs GEORGE C. BOSSON, JR.	97
The Ruins at Selinus	117
Kaleidoscopic La Paz: The City of the Clouds; by HARRIET CHAMLERS ADAMS	119
The Mountaineers of the Euphrates; by ELLSWORTH HUNTINGTON	142
One Thousand Miles of Railway Built for Pilgrims and not for Dividends; by Colonel F. R. MAUNSELL	156
Scenes in Asia Minor	173
A Jack in the Box: An Account of the Strange Performances of the Most Wonderful Island in the World; by Captain F. M. MUNGER, Senior Captain U. S. R. C. S.	194
Conditions in Cuba as Revealed by the Census; by HENRY GANNETT	200
A Wasteful Nation	203
Where Roosevelt Will Hunt; by Sir HARRY JOHNSTON, G. C. M. G., K. C. B., D. Sc. Combs, Late Special Commissioner in Uganda, etc., etc.	207
Amid the Snow Peaks of the Equator: A Naturalist's Explorations Around Ruwenzori, with an Excursion to the Congo State, and an Account of the Terrible Scourge of Sleeping Sickness; by A. F. R. WOLLASTON	256
Natal: The Garden Colony; by RUSSELL HASTINGS MILLWARD, Formerly American Vice-Consul at Durban, Natal	278
The Magnetic Survey of Africa; by L. A. BAUER, Director, Department of Terrestrial Magnetism, Carnegie Institution of Washington	291
In Civilized French Africa; by JAMES F. J. ARCHIBALD, F. R. G. S.	303
The Black Man's Continent	312
Hunting the Great Brown Bear of Alaska; by GEORGE MIXTER, 2D, of Boston	313
The Panama Canal; by Lieut. Col. GEO. W. GOETHALS, U. S. Army, Chairman and Chief Engineer, Isthmian Canal Commission	334
The Original Boundary Stones of the District of Columbia; by ERNEST A. SHUSTER, JR., U. S. Geological Survey	356
The Leach's Petrel: His Nursery on Little Duck Island; by ARNOLD WOOD	360
Colossal Work in Baltimore; by CALVIN W. HENDRICK, Chief Engineer Sewerage Commission of the City of Baltimore	365
The World's Most Cruel Earthquake; by CHARLES W. WRIGHT, of the U. S. Geological Survey	373
The American Red Cross in Italy; by MABEL BOARDMAN, Director of the American Red Cross	396
Shackleton's Farthest South	398
The Call of the West. Homes are being made for Millions of People in the Arid West; by C. J. BLANCHARD, Statistician, U. S. Reclamation Service	403
Camps and Cruises of an Ornithologist; by GEORGE SHIRAS, 3RD	438
In Beautiful Delecarlia; by LILLIAN GORE	464
A Plague of Mice	479
The National Geographic Society and Geographic Work	485
Old Mines and Mills in India	489
Greely's "Handbook of Alaska"	491
The World's Highest Altitudes and First Ascents; by CHARLES E. FAY, A. M., Litt. D., President (1878, 1881, 1893, 1905) of the Appalachian Mountain Club, First President of the American Alpine Club	493

Page

A Wonderland of Glaciers and Snow; by MILNOR ROBERTS, University of Washington, Seattle 539
The Highest Point in Each State 539
Brittany: The Land of the Sardine; by HUGH M. SMITH, Deputy Commissioner, U. S. Bureau of Fisheries 541
When Our Country is Fifty Years Older; by RAPHAEL ZON, of the U. S. Forest Service .. 573
National Geographic Society Alaska Expedition 581
Notice to Members 584
The Economic Evolution of Alaska; by Major General A. W. GREELY, U. S. Army, Author of "Handbook of Alaska," etc. 585
Marking the Alaskan Boundary; by THOMAS RIGGS, JR., Chief of party, U. S. Alaskan Boundary Survey 593
Chartering a Coast-line of 26,000 Miles 608
The Monarchs of Alaska; by R. H. SARGENT, U. S. Geological Survey 611
The Big Game of Alaska; by WILFRED H. OSGOOD, of the U. S. Biological Survey 624
Some Giant Fishes of the Seas; by HUGH M. SMITH, U. S. Deputy Commissioner of Fisheries 637
Our Pacific Northwest; by N. H. DARTON, U. S. Geological Survey 645
The Tallest Tree that Grows; by EDGERTON R. YOUNG 661
Notes on the Eucalyptus Tree from the U. S. Forest Service 668
Magnetic Observations in Alaska; by DANIEL L. HAZARD, Coast and Geodetic Survey ... 675
Agricultural Capacity of Alaska: What Population Can the Territory Support? by C. C. GEORGESON, Special Agent in Charge of Alaska Investigations 676
Book Reviews 680
The Colorado Desert; by W. C. MENDENHALL, of the U. S. Geological Survey 681
King Herring: An Account of the World's Most Valuable Fish, the Industries it Supports, and the Part it has Played in History; by HUGH M. SMITH, U. S. Deputy Commissioner of Fisheries 701
Economic Loss to the People of the United States Through Insects that Carry Disease; by L. O. HOWARD, Ph. D., Chief of the U. S. Bureau of Entomology 735
Life in the Great Desert of Central Asia; by ELLSWORTH HUNTINGTON, of Yale University 749
The Glass-bottom Boat; by CHARLES FREDERICK HOLDER, Author of "Big Game Fishes," "Life of Charles Darwin," etc. 761
Explorations in Crete; by EDITH H. HALL 778
The Afghan Borderland: Part I: The Russian Frontier; by ELLSWORTH HUNTINGTON .. 788
With the Monks at Meteora: The Monasteries of Thessaly; by ELIZABETH PERKINS 799
The Prehistoric Ruin of Tsankawi; by GEORGE L. BEAM 807
Hidden Perils of the Deep; by G. R. PUTNAM, U. S. Coast and Geodetic Survey 822
The Wheeler National Monument 837
Notes on Burma; by THOMAS BARBOUR 841
The Afghan Borderland: Part II: The Persian Frontier; by ELLSWORTH HUNTINGTON .. 866
Scenes from Greenland 877
The Discovery of the Pole:
First Report by Dr. FREDERICK A. COOK, September 1, 1909 892
First Report by Commander ROBERT E. PEARY, U. S. N., September 6, 1909 896
North Polar Map 915
Fishing and Hunting Tales from Brazil; by DEWEY AUSTIN COBB 917
The North Pole 921
The Temples of India; from Photographs by W. M. ZUMBRO 922
The Heart of the Antarctic; by Lieut. ERNEST H. SHACKLETON 972
Mrs. Gardiner Greene Hubbard 1008
The North Pole 1008
Program of Meetings of the National Geographic Society, 1909–1910 1009
The Route over which Moses Led the Children of Israel out of Egypt; by FRANKLIN E. HOSKINS, of Beirut, Syria 1011
Arabia, the Desert of the Sea; by ARCHIBALD FORDER, of Jerusalem 1039
A Country where Going to America is an Industry; by ARTHUR H. WARNER 1063
Turbulent Nicaragua 1103

INDEX TO ILLUSTRATIONS

AFRICA: Page

A Masai and his wives 214
An American missionary in Natal 281
An Andorobo 220, 222
Andorobo beau 220
Andorobo families in the forests of Mount Kenia 223
Arab children learning the Koran in Durban, Natal 279
A rhinoceros 229
A "ricksha" runner in Durban 279
Baobab tree 289
Bedouin girl at home, North Africa 310
Belle of Mombasa with her pet deer 210
Boassine, a native king at Kumassi, Ashanti. 297
Boys in regalia for first tribal ceremony: Kenia Province 236
Buffalo in the Kenia Province 232
Burchell's zebra on the Athi plains 229
Buying a bride's boxes for her wedding trousseau: Tunis 302
Caid Ben Bou Aziz, son of chief of all the Arabs, Ben Gana 309
Children of Algeria 309
Colobus monkey 230
Colonel Bast and his mixed Sudanese and Masai troops at Moshi 211
Country "devil" play in a Liberian town 300
Country devil play wherein girls are prepared for married life, Liberia 301
Cow eland on the Athi plains 230
Desert school-house 308
Fisherwomen and their baskets: Victoria Nyanza 235
Forest scene typical of the slopes of Mounts Kenia and Ruwenzori 240
French soldier in an Algerian regiment 309
Gala woman of Italian Somaliland 251
Gala warrior of Hamitic stock in Italian Somaliland 256
Girl friends in a village of East Equatorial Africa 239
Girl of Mombasa 208
Group of Kroo children in Monrovia, Liberia. 299
Highest peaks of Ruwenzori, from the slopes of King Edward Peak 260
Hippopotami disporting in a river of British East Africa 245
Hippopotamus in the Rift Valley 231
Horsemen in Algeria 305
Hunting scene in East Africa 215
Interior of a house in Tunis, North Africa .. 304
In the great Rift Valley in East Africa 216
In the jungle near Mount Kenia 231
Into the desert south of Biskra 308
Ivory and rubber at Matadi, on the Congo River 269
Kroo warrior with charms and fetiches, Liberia 298
Lendu woman from the west coast of Albert Nyanza 222
Lioness trapped in British East Africa 246

AFRICA (continued): Page

Mark, a native evangelist, preaching in a kraal: Natal 285
Masai men resting while their wives build a new village 212
Masai settlement 213
Mission children in the Congo State 295
Mohammedan high priest in Durban 280
Mosses on the heath trees of Ruwenzori 259
Mountain road in Algeria 309
Mrs Akeley's largest elephant, killed in the forests of Mount Kenia 244
Native beehives near Mount Kenia 225
Native drums in Africa 296
Native industries near Durban, Natal 286
Native near Mount Elgon 222
Native road in Uganda 235
Native trial in Natal 284
Native village in a banana grove: Uganda ... 249
Natives carrying sugar cane near Mount Kenia 226
Natives ready for a ceremonial dance 237
Natives taking bark to Government houses, Windhoek, German Southwest Africa ... 293
Natives with ivory: Congo region 269
On the Athi plains 224
On the Zambesi 275
Primitive method of striking fire in many parts of Africa 272
Pygmy lady of the great Congo forest 265
Resting and feasting after a morning's hunt in the jungle 219
Resting in the desert 302
Rich native and family of Angola 294
Road between Jijelli and Bougie, Algeria 307
Roman ruins in Tunis 308
Scene in the forest of East Africa 238
Shoeing a mule at Greytown, Natal 280
Street scene in Mombasa 209
Tattooed beauty from the Lower Congo 266
Tattooed young native girls: British East Africa 270
Temporary granary while grain is drying: Natal 288
The "Marimbo," the native piano of Angola. 295
Tower from which natives watch for lions: British East Africa 255
Typical trees in a South African landscape: Euphorbia 289
Village scenes on the Nile, near Bor 277
Water trough, section house, and ½ kilometer stone 308
Woman stringing beads: Natal 288
Zulu chief and his wives: near Bulawayo, Rhodesia 290
Zulu nurse boy in Durban, Natal 278
Zulu warrior: Natal 282
Zulu wrestling match: Natal 283

ALASKA:

Alaska moose (*Alce Americanus gigas*) 625
Alsek (live) glacier on the Alsek River 597
An Eskimo and three of his children 317

ALASKA (continued): Page
An Eskimo and two of his dogs..... 320
A typical camp in Alaska..... 325
Bear hunting as it is actually practiced..... 326
Bear Lake Pass looking toward Bear Lake Valley..... 323
Bear partly skinned..... 327
Busy day in an Alaskan camp preparing moose heads..... 630
Caribou killed on the flat top of a high mountain..... 627
Dall's sheep near the head of Nabesna River. 628
Delta of the Alsek River..... 598
Discharge of the Alsek Glacier, Mount Fairweather in the background..... 605
Elevated cache for provisions..... 599
Fairbanks town, Tanana Valley, on July 4, 1908..... 590
Four Aleut Indians and a three-hatch native skin canoe..... 318, 319
Four bear shot at one time..... 329
Fresh-killed bear..... 327, 328
Fur-seal rookery on Saint George Island, Pribilof..... 586
Fur-seals: Saint Paul Island, Bering Sea.... 632
Group of Eskimo..... 317
Growing forest on Malaspina Glacier, near Mount Saint Elias..... 592
Hair-cutting in camp..... 325
Harem of fur-seals: Pribilof Islands, Bering Sea..... 633
Indian woman and child at door of "barabara" or sod hut..... 320, 321
Kadiak bear, Kadiak Island..... 635
Landing a calf from the steamer at Kadiak.. 316
Lining canoe up-stream from the boat on the shore to the camp..... 322
Marking the Alaskan boundary..... 602
Miners, prospectors, and surveyors are allowed to kill game in any season..... 600
Moose which fell conveniently on bank of a tributary of the Yukon..... 626
Mosquito veil..... 607
Mountain peaks near Valdez..... 315
Mountains surrounding Disenchantment Bay. 604
Mount Cook, Mount Vancouver, and Mount Hubbard..... 601
Naturalists returning with eleven caribou skulls: Glacier Mountain..... 631
Near the boundary crossing of the White River..... 603
Observing from "Black Tip," a triangulation point near the coast..... 594
Placer mining on Ester Creek, near Fairbanks..... 588
Photos of Fire Island, Perry Peak, McCulloch Peak, and Castle Island..... 196, 197
Point on the 141st meridian..... 600
Running loaded canoe down-stream after breaking camp..... 322
Sea lions disporting on Castle Island..... 199
Sea lions: Pribilof Islands, Bering Sea..... 634
Skinning a bear..... 329
Smoke-house for protection against mosquitoes and gnats..... 600

ALASKA (continued): Page
Solan geese flying through steam and fumes of Perry Peak and Castle Island..... 198
Starting on a 40-mile trip to the Indian village at the mouth of Bear River..... 323
Taking advantage of a fair wind..... 600
Team of setter dogs and their white owner on the divide between the Pacific and Bering Sea..... 315
Three-hatch "bidarki" or "kyak" (native skin canoe)..... 318
Three scows full of salmon for the cannery at Chignik..... 316
Tracking up the Alsek River..... 597
Tripod observing platform and triangulation signal, near Yakutat Bay..... 595
Type of aluminum-bronze monument used on the more important points along the boundary..... 606
Type of half-breeds, Siwash Indian-Swede... 321
Views of Perry Peak in June, 1906..... 195
Young bear at play and at rest..... 330-333

ASIA—CENTRAL:
Afghan cultivators at a village near Kafir Kala..... 869
Afghan soldier in uniform..... 792
Baking bread in Seyistan, on the Afghan border..... 874
Caravan-serai in the desert of eastern Persia. 789
Comfortable Persian villager..... 796
Commandant and soldiers at Kafir Kala..... 871
Commandant of Kafir standing outside the walls of the fort..... 872
Erecting a Turkoman tent..... 758
Gate of the fort of Kafir Kala..... 874
Group of Afghan nomads..... 794
Group of Turkomans..... 759
Hakim Kahn, the Afghan chief of Kuzzil Islam..... 870
Inhabitants of the village with the round loop-holed tower..... 873
Kafir Kala, the most important fort on the western frontier of Afghanistan..... 871
Kurdish women and children on the northern frontier of Persia..... 759
Kurdish wrestling match outside a mountain village..... 756
Old Afghan chiefs beside their tents: Russian officer on the left..... 869
Persian village of domed mud houses covered with snow..... 797
Persian village on the Afghan frontier, with loop-holed tower..... 873
Ploughing with humped bullocks and wooden plough: Afghan border..... 793
Poverty-stricken Persian family..... 794
Prosperous Afghans and their sons..... 872
Ruins in the upper portion of the Merv Oasis. 754
Ruins of an old mosque in the lower portion of the Merv Oasis..... 754
Sacred platform decked with wooden birds... 797
Sample of the mountainous southern border of Transcaspia..... 751
Scenes along the Transcaspian railroad in the midst of the desert..... 752
Soldiers of Hakim Kahn..... 870

ASIA—CENTRAL (continued): Page

Tombs of Meshed, the most holy place in Persia 790
Turkoman ready for the trail..... 758
Turkoman tents on the edge of the Transcaspian Desert 751
Turkomans in the sandy desert of Transcaspia 789
Two Persian fakirs, supposedly holy men.... 792
Village and irrigated fields on terraces in eastern Persia 793
Village of Turkomans who have given up the nomadic life 756
Well-to-do Persian family 796

ASIA MINOR AND ARABIA: Page

An Arab sheikh.....1060
An Armenian family..... 145
Arabian boys in a lonely kahn on the desert of Mesopotamia 184
Arabian women churning butter.....1052
Armenian children in an American school in Asia Minor 178
Armenian orphans in school at Aintab..... 180
Armenians constructing a raft of inflated sheepskins 148
Armenians of Marash 185
Beautiful fountain in Edom, with Bedouin women filling water skins.....1033
Bedouin tent made of goat's hair cloth.....1059
Blind orphans in the American school for the blind: Urfa 178
Boys carrying lunch to workmen in Marash. 193
Bullock train hauling grain to market..... 174
Camel and young: Arabia.....1045
Camel train taking the noonday rest..... 176
Carpenter shop in the American industrial school: Urfa 180
Cartload of grapes 182
Carved doors at Hodeida: South Arabia.....1056
Castle of Gerger..... 154
Castle of Marid, El Jowf: North Arabia....1049
City wall and precipice surrounding Diarbekir. 186
Collecting salt off the desert: Arabia.....1043
Completed raft of inflated sheepskins..... 149
Convent of Saint Catharine at Sinai, dating back to 527 A. D..... 1024, 1028
Convent of Saint Catharine, Sinai, from stairway leading to the Mountain of the Law 1030
Costumes worn by Arabs in Asia Minor..... 182
Curious bit of wind carving in the Desert of Sinai 1019
Date-palm with ripe fruit: Arabia.....1047
Daughters of the desert: Arabia.....1055
Departure of the first train leaving Damascus for Medina 159
Departure of the holy carpet from Damascus. 157
Engine "Abdul Hamid" on the Mecca Railroad 158
Entrance to the main gorge of the Euphrates. 151
Entrance to the Oasis of Hazeroth.....1032
Euphrates River near the western border of Mesopotamia 177
Gateway on the stairway to the top of the Mountain of the Law.....1031
Group of Armenians ready for dinner..... 145

ASIA MINOR AND ARABIA (continued): Page

Hazeroth, a beautiful oasis where the children of Israel tarried seven days.....1035
High priests in Medina welcoming the first train from Damascus..... 170
Hittite figure carved in solid limestone at Gerger Castle 155
Inaugurating the opening of the railroad at Tebuk 167
In the gorge of the Tigris River: Taurus Mountains 177
Island castle in the Euphrates River..... 147
Ithera, a hamlet in Arabia.....1048
Jebel Sufsaf, claimed by most scholars as the mountain from which the Law was proclaimed 1023
Jebel Sufsaf: The Mountain of the Law.....1024
Jerash: A city of the Decapolis, on the headwaters of the Jabbok.....1036
Kurdish Moslems on plains of Suruj, near Aintab 187
Kurd swimming across the Euphrates on an inflated goatskin 153
Maan, a city in the desert..... 160
Making stamped and embroidered saddlery in a Turkish town 188
Making Turkish shoes and slippers..... 189
Making Turkish tombstones..... 185
Marble gorge of the Euphrates near Keban Maaden 150
Measuring salt: Arabia.....1044
Moslem women in a village of Asia Minor... 172
Moutaka pillars in Arabia, seen from railway to Mecca 165
Mule train carrying grain on the plains of Asia Minor 175
Nagb el Hawa: Some nice red granite boulders near Sinai 1018
Nagb el Hawa: The windy defile leading into the heart of the Sinai group.....1020
Narrow bit along the seashore of the Gulf of Akaba 1037
Oasis of Hazeroth, seen from the pass above and about a mile away.....1034
Oasis of Kaf, in the midst of the North Arabian desert 1042
Only entrance to the convent of Saint Catharine, Sinai 1029
Only means of transport in all the peninsula: The slowest in the world.....1016
Our Sinai cameleers.....1014
Pharaoh's island and ruined castle.....1038
Pharaoh's treasury: Petra.....1041
Plain of Er-Rahah, seen from the mountain above 1026
Portion of the city of Harput..... 146
Preparing cotton for weaving: Ginning, beating, and spinning 190
Primitive door in Jowf: Arabia.....1050
Railroad camp in the desert..... 169
Rock-cut tombs at Medain Salih..... 168
Rocky defile, or the sik, which was the entrance to Petra 1040
Rocky road winding down into Hazeroth....1032
Roman ruins at Pergamus..... 14
Ruins of Roman baths at Pergamus..... 15

ASIA MINOR AND ARABIA (continued): Page

Ruins of Sardes, home of Crœsus..... 4
Ruins of the University of Pergamus..... 17
Scene in the Gregorian church school in Mesopotamia 184
Sheiks from the desert come to Tebuk to see the first train..... 166
Shepherd and Angora goats..... 175
Skins filled with water: Arabia.....1053
Some callers at our camp in the land of Edom 1037
Some of our cameleers settled down for the night 1017
Syrian monastery against wall of canyon of the Euphrates 154
The coffee-maker: Arabia.....1054
The Niobe on Mount Sipylus at Magnesia.... 3
The overcoat of Arabia.....1051
The port of Hodeida, in South Arabia.....1057
Traveling in Asia where the roads are bad... 187
Tomb of Neby Salih, a few hours' ride from Sinai 1017
Turkish gentlemen at Aphrodisias..... 13
Turkish policeman and two Turkish drivers.. 183
Turkish soldiers crossing the Muzur Su..... 152
Turkish tanners 192
Turkish troops in the Central Turkey College Hospital 183
Turkish woman carried to the American Christian Hospital: Aintab..... 179
Typical Bedouin camp.....1058
Typical fort in Arabia along the caravan route to Mecca 162
Vegetable shop in a Turkish town in Asia Minor 191
View of ancient Philadelphia 7
View of the stadium at Aphrodisias..... 10
View of Tebuk, on the Mecca railway..... 161
Village caravanserai where travelers are herded with their pack trains at night.... 176
Village women spinning near Urfa..... 181
Village women sorting coarse native grain... 181
Wall of Diarbekir..... 186
Walls of Philadelphia..... 8
Wall of Temerlane at Philadelphia..... 10
Women waiting for treatment in the Aintab dispensary 179
Young Armenian couple moving to a new house 174

BIRDS: Page

Brown pelican feeding a young bird larger than itself 445
Brown pelicans on Pelican Island, Florida... 442
California and ring-billed gulls: Western Canada 458, 459
Colony of white pelicans on Big Stick Lake, Saskatchewan 460
Egg of Leache's petrel: Natural size..... 365
Feeding young wild geese: Western Canada. 457
Fish hawk returning to its nest on the shore. 441
Flamingoes asleep on their nests..... 452
Flamingoes feeding young..... 451
Flamingoes in flight..... 454
Flamingoes returning to their nests..... 447
Flamingoes standing guard over their nests.. 453
Group of brown pelicans in American Museum of Natural History..... 443

BIRDS (continued): Page

Murres on the Pinnacles: Farne Islands.... 462
Palmer's thrasher at nest in cholla cactus: Arizona 446
Petrel burrow in a bank..... 361
Petrel burrow on the ground: Little Duck Island, Maine 360
Petrel leaving nest 362
Petrel nest and egg..... 362
Photographing a fish hawk on Gardiner's Island, New York..... 440
Portion of a deserted flamingo city: The Bahamas 448
Sand rendered in feathers: Young black skimmer on Cobb's Island..... 438
Showing great expanse of petrel's wing..... 364
The pelican yawn 444
The Pinnacles: Farne Islands..... 463
Three adult petrel in hand..... 363
Turkey vultures: California..... 455
Umbrella blind in a man-o'-war bird rookery on Cay Verde..... 444
Young bluejays: Englewood, New Jersey.... 439
Young brown pelican after feeding..... 445
Young fish hawks about to leave their nest: Gardiner's Island, New York..... 439
Young flamingo eating shell of egg from which it was hatched..... 450
Young flamingoes about two weeks old..... 447
Young flamingoes in flooded nest..... 449
Young long-billed curlews: Western Canada.. 456
White pelican feeding young..... 461

BOLIVIA:

At the railroad station, La Paz..... 120
Cemetery in La Paz..... 135
Chola girl, La Paz..... 132
Chola girl in park: La Paz..... 133
Cholo boy of La Paz..... 126
Court-yard of the hotel, La Paz, formerly a colonial mansion 121
Going to market in La Paz..... 134
Holiday crowd in the Plaza San Pedro, La Paz 138
In the highlands of Bolivia, near La Paz.... 124
Llamas of La Paz..... 141
Market scene in La Paz..... 139
Monte Blanco, overlooking La Paz..... 136
On the heights overlooking La Paz: Mount Illimani in the distance..... 122
On the road to La Paz..... 123, 130
Pet fighting cock of the family: Near La Paz. 131
Plaza in La Paz: Mount Illimani in the distance 128
Plaza San Sebastian: La Paz..... 137
Street peddler of La Paz..... 125
Street scene: La Paz..... 140
Types in La Paz..... 127
Typical Indians of Bolivia..... 129
Youthful Pongos on their first visit to town.. 132

BRITTANY:

At a pardon in Concarneau..... 568, 570
Breton peasants 562
Breton peasant's home 546
Breton washerwomen 561
Breton women threshing the grain with jointed flails 549

BRITTANY (continued): Page
Gathering seaweed in the surf during a storm: Finistere 552
Gigantic menhir: Brittany 567
Going to market: Brittany 565
Itinerant basket vendor 543
Little Breton maids 542
Little fifteenth-century church in Concarneau. 563
Open-air oven and characteristic country cart. 550
Pardon in Concarneau: Another part of the street procession 571
Pardon on the feast day at Saint Gwenole, Brittany 569
Peasant type: Maid with water pitcher 548
Principal room in a Breton peasant's home .. 547
Proud purchaser of a pair of wooden shoes .. 564
Shrine and spring: Brittany 548

CONSTANTINOPLE:
Bath-room in the palace of Dolma Baghtcheh. 59
Beggar in Constantinople 55
Booth in the bazars in Constantinople 60
Corner of a Turkish cemetery 49
Crowd at gate of Sultan's palace 46
End of the Bosphorus at entrance to the Black Sea 65
Fortress built by Mohammed the Conqueror .. 52
Fountain at the Mosque of Sultan Bayezid .. 53
Kettle drums of the Janissaries 50
Mausoleum or turbeh of Sultan Mahmoud the Great 63
Mosque of Yeni-Djami on the Bosphorus 67
Old walls and moat surrounding ancient city of Constantinople 48
Opening the treasure house in the morning .. 58
Plane tree of the Janissaries 51
Scene on the Bosphorus: View southward from Ortakeui 64
Street in the Turkish quarter 56
Sultan of the Ottoman Empire going to mosque 45
Tinman in the bazar 54
Turkish barber 56
Turkish gentlemen mounted on Arab horses .. 47

CRETE:
Cretan boy peddling cookies 782
Cretan children 781
Cretan girls who wash the pottery 784
Cretan mountaineer 787
Cretan road 780
Cretan women spinning 780
Greek foreman, Aristides, mending a vase ... 784
Large jar as high as a man from the Knossos palace 782
Monks of Goma monastery, where travelers are gladly entertained 781
Opening clay sarcophagus of 1400 B. C., containing skulls and bones 784
Red stone lamp from Pseira, 1500 B. C. 783
Removing the last earth from about a vase .. 784
Scene at Cretan fountain 783
Stairs in Phæstos palace 786
Venetian fountain in the square of Candia, Crete 785

FISH AND FISHERIES:
A few barrels of salt herring at a North Sea port 729

FISH AND FISHERIES (continued): Page
Big heap of fish just unloaded from a North Sea drifter 727
Black and white sea flowers, seen through the glass-bottom boat 764
Black jelly-fish, photo from life, in the water. 768
Blue-eyed perch 777
Brush weir on the coast of Maine for catching herring 705
Characteristic pose of an ocean sun-fish 638
Crayfish and star-fish 767
Devil-fish: Santa Catalina Island. Seen through a glass-bottom boat 775
Devil-fish. Some specimens of this fish weigh two tons 640
Employees of an English herring farm 718
Female sheepshead 769
Fleet of sardine boats in port: Brittany 554
Gang of herring curers and packers 718
Gathering the catch in a brush weir on the Maine coast 707
Giant California star-fish: Santa Catalina 766
Giant jelly-fish 770
Giant sea anemones 771
Glass-bottom boat 762
Golden angel fish 768
Haul of herring, Gastineau Channel, Douglas City, Alaska, 1903 710
Herring fisher boats of Norway: Small-net fishing 734
Herring fleet at Yarmouth, England 713
Herring fleet in a Norwegian harbor 733
Indian-head fish 772
Jew-fish about to seize a baited hook 639
Kelp beds as seen through the glass-bottom boat 763
Landing the herring catch at Lowestoft, England 722
Man-eater shark 642
Mimic sculpins imitating rocks 776
On board a Lowestoft drifter 717
One of the most expert herring catchers—a thresher shark 731
Part of the herring fleet at Lowestoft, England 717
Piles of herring ready for packing: Lowestoft, England 728
Plunge of a harpooned whale shark 643
Saw-fish of the southern lagoons 641
Scene in an English herring packing yard 720
Selling a small lot of fish at auction 724
Sorting and packing the catch at Lowestoft, England 723
Spotted kelp fish 773
Stack of herring boxes awaiting the fishery at a North Sea port 721
Street in Yarmouth where the herring fishermen live 714
View of a brush weir at low tide 706
View of a large sardine cannery in Brittany .. 559
Women of Brittany sorting and arranging sardines for drying 558
Young Port Jackson shark and eggs 774

FORESTRY:
An American elm 41
Big tree, General Grant, in California 40

FORESTRY (continued): Page

Building a fire-line in Helena National Forest, Montana 37
Close group of young redwoods: Sequoia National Park, California 38
Cooking poison to exterminate prairie dogs: Denver, Colorado 33
Distributing prairie dog poison on the ranges. 35
Douglas fir, the principal timber of the Pacific northwest coast 659
Drying the poisoned wheat: Denver, Colorado. 35
Eucalyptus 76 feet in circumference..... 665
Eucalyptus forest in Australia..... 666
Eucalyptus globulus on ranch of Ellwood Cooper, Santa Barbara, California..... 670
Eucalyptus globulus (the blue gum): Santa Barbara, California 669
Eucalyptus rudis on grounds of Minnewawa Ranch, Fresno, California 671
Eucalyptus trunk used as a kitchen: Australia 667
Eucalyptus viminalis: Pasadena, California... 672
Fallen chestnut tree in the Appalachians..... 41
Farming in the path of the flood..... 31
Forest area which has been burned over..... 27
Forest ranger's cabin in Gila National Forest, New Mexico 28
Forest ranger scaling logs in M'Alpine timber sale, Colorado 32
Forest Service men on the fire line..... 36
Looking off of mesa on M'Alpine timber sale, Colorado 24
Mixing poison and wheat: Denver, Colorado.. 34
Mountain road with peeled timber (white fir): Germany 579
Piling brush on cut-over area, Montezuma National Park, Colorado..... 26
Redwood cut on Vance's property, Humboldt County, California 576
Sheep from National Forest Reserve bunched after shearing 22
Sheep grazing on burnt and cut-over area, Unita National Forest, Utah..... 23
Sheep on our national forests..... 21
Stock range below timber line: Gila National Forest, New Mexico..... 25
Turpentining in Ocilla, Georgia..... 39
Two hundred square miles of once wooded mountains in China..... 30

INDIA AND BURMA:

Another view of the great temple of Bhuvaneshwar 943
Arched mosaic doorways of the Mosque of Fatch Pur Sikri 937
Arch to the entrance of the great temple at Bhuvaneshwar 942
A robber family: India..... 956
A watchman: Temple at Belur..... 942
Bath tub of the Emperor Jehangir..... 936
Boys begging at Nasick..... 924
Broken pillar and capital from Saranath..... 925
Burmese ferry boat 853
Burmese lady at Mandalay..... 861
Burmese woman 843
Chapels covered with palmleaf mats while being repaired 848

INDIA AND BURMA (continued): Page

Corridor in the great temple at Rameswaram, 670 feet long 951
Country folk come to Bhamo to trade..... 862
Crowd of Hindus at a religious festival at Secunderamalai, near Madura..... 967
Crowds on the river banks await the steamer to make purchases..... 855
Cups in bedrock used as mortars for grinding ore: India..... 489
Detail of carving on an entrance to a chapel: Rangoon 852
Early morning among the six hundred pagodas outside of Mandalay..... 865
Elephant piling teak..... 849
Entrance to ancient gold mines in India..... 490
Entrance to the compound of a Chinese merchant's house in Bhamo..... 860
Entrance to the great temple of Madura..... 968
Extorting alms from passers by in India..... 954
Famous rock of Trichinoply..... 943
Fanatic rolling around the rock at Secunderamalai 954
Figures carved on the rock-cut temples at Ujjain 928
Five-storied pavilion or summer palace of the Emperor Akbar 939
Four robber caste maidens..... 957
Gateway to the port at Agra, built by Akbar the Great 964
Gateway to the Tope at Sanchi..... 929
Gathering pineapples and jakfruit in Rangoon: Burma 844
Gem of decorative architecture: Tanjore.... 950
Golden spire of Schway Dagon at Rangoon: Burma 846
Great tower over the entrance to the Hindu temple of Siri Rangam..... 961
Heathen festival held in southern India every twelve years 582
Heathen ascetic or holy man..... 947
Hindu religious festival at Gunga Saugar, North India 583
Holy man lying on a bed of spikes..... 955
Images in one of the chapels which surround Rangoon 850
Inner side of the left pillar of the gateway at Sanchi 933
Inner side of the west toran or gateway of the great Buddhist temple at Sanchi..... 930
Inside of the east toran or gateway of the Buddhist Tope at Sanchi..... 934
Inside of the northern toran or gateway to the Tope at Sanchi..... 931
Karens at Toungoo..... 861
Karupasawing or god worshiped by the people of the robber caste..... 952
Marvelous stone carving in front of Siri Rangam, near Trichinoply..... 958
Masterpiece of sculptured stone: Hullabid... 948
Military police taking a Burmese dacoit to his execution 854
Moat of the palace of the kings of upper Burma: Mandalay 864
Monasteries, rest houses, and chapels of Schway Dagon, Rangoon..... 847

INDIA AND BURMA (continued): Page
Morning bath and toilet of the pious at Secunderamalai, near Madura 966
Mud and plaster shrines about a sacred tree: Burma 859
Observatory at Delhi 936
On the upper reaches of the Irrawaddy 856
Open throne in ruins of Hampi 965
Outer side of the east gateway at Sanchi 932
"Pady boat" floating down the Irrawaddy 856
Palace at Bijopur, supposed to contain hairs from the Prophet's beard 944
Part of the Buddhist railing from the Tope at Bharhut 927
Pilgrims bathing in the surf at Puri 924
Pillars on which lights are placed, Ujjain 928
Rock-cut temples of Mahalipura, near Madras. 962
Rose temple at Bijopur 944
Round entrance to an ancient Chinese temple at Bhamo 860
Scenes on the Irrawaddy 857
Shans of Burma with their flapping straw hats 858
Shrines about the base of Schway Dagon's spire, Rangoon: Burma 847
Students of theology: Tanjore 953
Students of the Vishnu sect: South India 955
The great temple at Bhuvaneshwar, covered with intricate carving 941
The great temple at Buddha Gaya 926
The Kailas of rock-cut temple at Elora 963
The most famous temple of India, the Jagannath at Puri 940
The most laboriously wrought carving in the world 945
The music hall at Delhi 925
The village image of the Buddha 859
Tomb of Taglaksha at Taglakshabod, Delhi 938
Two Shan women carrying a basket of fruit: Burma 842
Unique Sanscrit library: Tanjore 949
View of Madura from the tower of the American mission church 970
View of the shrines on the platform of the Schway Dagon, Rangoon 851
Views of the Queen's golden monastery at Mandalay 863
Village scene in upper Burma 858
Wandering mendicant of southern India 952
Wild Kachins at Bhamo 862
Women of upper Burma 861
Wonderously rich temple of southern India, Chidambaran 946
Young Burmese monks, their boy attendants standing in the rear 845
Y. M. C. A. building in Bombay 923

IRRIGATION PROJECTS:
Baling hay in Oregon on the former sage-brush desert 421
Building a homestead on the Truckee-Carson Irrigation Project, Nevada 405
Building the highest masonry dam in the world: Shoshone dam, Wyoming 410
Closing Colorado River during construction of Laguna dam, Yuma Project 419

IRRIGATION PROJECTS (continued): Page
Gates in the main canal of the Truckee-Carson Project, Nevada 409
Irrigated orange groves in the Salt River Valley, near Phœnix, Arizona 424
K. Van der Aarde and his apple trees: Yakima Project, Washington 435
Lower portal, Corbett tunnel: Shoshone Project, Wyoming 414
Millet field on the Truckee-Carson Project, Nevada 430
Pathfinder dam of the North Platte Project 418
Portion of concrete-lined main canal of the Klamath Project, Oregon 409
Pumpkins in an orchard: Yakima Project, Washington 428
Relics of old Arizona: The Apache and the cactus 413
Sage-brush desert before cultivation: Umatilla Project, Oregon 420
Scene on a turkey farm on the Garden City Project, Kansas 429
Seedless Sultana grapes grown by irrigation near Carlsbad, New Mexico 436
Sheep on the Truckee-Carson Project of Nevada 432
200 colonies of bees on Truckee-Carson Project, Nevada 406
Two-year old homestead on the Truckee-Carson Project, Nevada 406
Type of centralized graded schools on the Huntley Project, Montana 405

ITALY:
A maiden's prayer 1086
Another type of Sicilian 1082
A passion flower 1078
A shepherd and his lute under the almond trees: Taormina, Sicily 1093
Bound for the market: Palermo, Sicily 1073
Box coffins ready for burial in Cemeterie Inglesie 384
Care-free children of sunny Sicily 1070
Cathedral in Reggio showing total wreckage 387
Child of Sicily 1075
Chums 1095
Common scene in Sicily: The street cobbler and the teller of parables 1076
Corso Vittorio Emmanuele looking north along water front, Messina 376
Country scene in Sicily 1068
Descendant of the tyrants of Syracuse 116
Dreaming: A singer of old Sicily 1091
Factory just south of Messina 389
Francisco, who dug himself out of the ruins of Messina 385
Girl of Sicily 115
Goat-herds in Sicily 109
Grotte di San Giovanni, street of sepulchres: Syracuse, Sicily 104
Happy hours in Sicily 1094
Hospital in which 200 patients perished: Messina 382
In old Syracuse 1088
Interior of Duomo at Messina, showing rows of saints 383

ITALY (continued): Page
Interior of San Paulo Cathedral, showing paintings which were saved..... 383
Interior view of the Duomo at Messina, showing total collapse 382
In the philosopher's garden.....1084
In the public square: Castrogiovanni, Sicily..1065
Ladies in Reggio, Calabria, before the earthquake of 1908 111
Little sweethearts 1080
Lovers 1081
Messina, before the earthquake of December, 1908 ..... 98, 374
On the shores of sunny Sicily..... 106
Piana dei Greci: Sicily.....1066
Piazza Dogana: Messina 389
Piazza Immaculata and Corso Cavour, showing good construction intact and poor construction wrecked 390
Piazza Municipali, showing buckling of granite blocks, Messina 395
Piazzo San Leo looking west: Messina..... 380
Quaint costumes from Reggio, Calabria..... 110
Romeo and Juliet in Sicily.....1089
Room in which the American consul and his wife were killed 387
Ruins of a great temple at Selinus or Selinunto 105
Sacred tomb in the Duomo of Messina not spared by the earthquake..... 388
Scene along Via Primo September, Messina, showing soldiers in charge..... 379
Scene in Reggio, showing survivors and temporary quarters 381
Scenes in Syracuse: Sicily..... 113
Scenes in Taormina: Sicily..... 112
Sicilian belle 1037
Sicilian cart: Palermo.....1072
Sicilian lady 1079
Sicilian road 1067
Sicilian troubadour 1090
Sicilian type 114
Sicilian youth 1069
Sketch of Messina..... 375
Stone quarries of Syracuse, Sicily..... 103
Street scene: Settingiano, Calabria.....1066
Street scene: Termini, Sicily.....1064
Summer time in Sicily.....1092
Temple of Concord at Girgenti, Sicily..... 100
These Sicilian girls might almost be called daughters of ancient Carthage.....1085
Tombs of Campo Santo, Messina, opened by the earthquake 386
Tunny fish just landed at Syracuse, Sicily.. 99
Typical medieval castle in Sicily..... 107
Via Garibaldi, Messina, looking north..... 379
Via Pellicano looking south along water front in Reggio 376
View along quay in Messina, showing a displacement 392
View of Mount Etna from Taormina, Sicily. 96
Village life in Sicily.....1077
Watching Mount Etna, Sicily.....1083
What shall we do?.....1074
Young Sicilian boys who perhaps some day may become American citizens.....1071

MAPS AND DIAGRAMS: Page
Asia Minor and the Damascus to Mecca Railway 173
Bogoslof Island, Alaska, in September, 1908.. 194
Brooklyn Rock in Buzzards Bay, Massachusetts 823
Changes in shore of Nantucket Island, Massachusetts, from 1890 to 1908..... 831
Chart of New York harbor made in 1737.... 825
Columbia River entrance, showing changes from 1792 to 1905..... 834
Diagram—Probable uses of land of North America fifty years hence..... 574
Diagram showing amount of excavation for Panama Canal required and accomplished. 355
Effect of improvement at the entrance to Galveston, Texas 826
Fishing Point, Maryland, from surveys of 1849 and 1908..... 828
Growth of land at Cubits Gap, Mississippi Delta, from 1852 to 1905..... 833
Map of North Polar regions..... 916
Map showing geology in the vicinity of Messina 394
Map showing original boundary stones of the District of Columbia..... 357
Map showing the route of the Exodus.....1013
Movement of Rockaway Beach and Inlet, Long Island, from 1835 to 1908..... 830
Outline map of Alaska..... 674
Outline map of South Polar regions.... 399, 1007
Outline map of Washington and Oregon..... 646
Outline map showing location of Government reclamation projects 437
Panama Canal and Gatun Lake..... 340
Portion of charts of 1869 and 1903 of the Pacific Ocean west of the Hawaiian Islands 836
Rainfall map of Washington and Oregon..... 647
Sicily and South Italy..... 118
Sketch map of Messina, showing area of maximum destruction 378
Sketch showing gravel beach deposits at Reggio and displacements..... 393

MOUNTAINS:
Among the crevasses of the Upper Grindelwald Glacier 529
Bergli hut (9,745 feet) in the Bernese Oberland 520
Castle Mountain as seen from the ridge between Gilahina Creek and Lakina River, Alaska 610
Crest of Siniolchum in the Himalayas, 23,000 feet 505
Crevasse from below the Bergli hut, Bernese Oberland 522
Dent de Satarma, in the Central Pennine Alps 527
"Eagle's Nest," the most difficult route to the Great Gable, Lake District, England.... 524
Eagle Peak from the Ramparts..... 532
Eastern portion of the Alaska Range, from the foot of Gakona Glacier..... 616
Fourteen feet of snow on the wagon bridge above Narada Falls 534

MOUNTAINS (continued): Page
Huascaran, Peruvian Andes, from an elevation of about 10,000 feet 515
In the southern Alps of New Zealand 502
Kangchenjunga from Guicha La (Pass), 16,430 feet 507
Kangchenjunga, 28,150 feet, third in altitude of the Himalayas 506
Melting snow clings to the skis 531
Misty morning: On the way to the Aiguille de la Za 528
Mount Ararat in Armenia, the most famous of mountains 494
Mount Assiniboine, a Canadian Matterhorn .. 512
Mount Drum, Alaska. Its isolation demands the observer's undivided attention 621
Mount Drum, from crest of ridge between Nadina and Klawasina Rivers, Alaska 617
Mount Everest, the crown of the world, the highest peak known 497
Mount McKinley, Alaska's highest mountain .. 622
Mount Rainier from Crater Lake 535
Mount Rainier from Lake Washington 536
Mount Saint Elias has figured in Alaskan explorations from earliest accounts 615
Mount Sanford, as seen from the banks of Copper River, Alaska 612
Mount Wrangell, Alaska: Intermittently active 620
Napes Needle, Great Gable, Lake District, England 525
Old "Cabane" on the east face of the Matterhorn 523
On the traverse of the Grepon, Chamonix Aiguilles 526
Ruwenzori, Africa's most famous mountain .. 516
Sass Maor, in the Tyrolese Alps 519
Seven feet of snow along Paradise River 532
Ski runners in Mount Rainier National Park. 533
Snider's Peak, rugged, angular, and formidable: Alaska 618
Southern face of Mount Rainier: 10,000 feet from valley to peak 533
Summit of Jannoo in the Himalayas, 25,000 feet high 498
Tehipite Dome in Tehipite Canon, High Sierra 540
The Matterhorn, showing on the left the Zmutt Ridge 521
The Sierras above timber line 508
Ushba, one of whose peaks is in Europe and one in Asia 501
View from near the summit of the Matterhorn 518
Views south from Kearsarge Pass, along the main crest of the high Sierra 538
Wasting snowdrift in the Sierras 511

NORTH POLAR REGIONS: Page
An arctic flower garden, yellow poppies predominating 887
An Eskimo, his wife, sons, and daughter 909
Arctic explorer coming out of a snow-covered igloo 903
Arctic hunters and Eskimos landing fine specimens of walrus 901
Children of the top of the world 912

NORTH POLAR REGIONS (continued): Page
Coast of Northumberland Island near the northwestern end 87
Coast of south Greenland, just at the Arctic Circle 878
Curious waterfall springing from the end wall of a large glacier 882
Eskimo mother and babe 910
Eskimos on the ice in North Star Bay 904
Group of Eskimo men, showing costumes and hunting implements 889
Mat Henson, who has made many trips with Commander Peary 877
Nuchto, Miss Bill, her sisters and stepmother. 888
Point from which Commander Peary made two successful trips across Greenland ... 885
Polar bears harpooned by Eskimos at Black Lead, east Greenland 905
Scene at Etah, the most northerly Eskimo settlement 906
Scene on the south Greenland coast, showing an odd way of dressing the hair 902
Scene on the Greenland coast 914
Sentinel Nunatak, at the head of Bowdoin Bay 884
Side wall of the Bowdoin Glacier 885
Small ribbon glacier, showing the forming of crevasses 890
South Greenland Eskimos in their kayaks or skin-covered boats 891
South Greenland Eskimos of the settlement of Disco 880
Striking scene in the Arctic regions: Ships, icebergs, and ice floats, Baffin Bay 913
The forbidding coast of Hakluyt Island, Inglefield Gulf 883
Typical group of north Greenland Eskimos at Karnah 881

PANAMA: Page
Basque from Spain, working on the Canal ... 352
Closing of the Chagres River at Gatun 346
Excavating for the site of the great Gatun dam, looking south 345
Great blast in progress 341
Low tide near the Pacific terminus of the Canal 338
Panama street reconstructed by the American government 351
Street in Panama before the American renovation 350

SOUTH POLAR REGIONS: Page
An ice cave in the winter 1004
Brocklehurst, looking down from a point 9,000 feet up Mount Erebus 993
Camp 7,000 feet up Mount Erebus: Steam from active crater can be seen 992
Cloud effect before the sea froze over 981
Crater of Mount Erebus, 900 feet deep and half a mile wide 995
Day with the motor-car on the sea ice 979
Derrick Point, showing method of hauling stores up the cliff 998
Flight of Antarctic petrels 985
Ice cavern in the winter: Photographed by the light of hurricane lamps 1002

SOUTH POLAR REGIONS (continued): Page
Ice flowers on newly formed sea ice early in the winter 1006
Landing stores from the boat at the first landing place after the ice-foot had broken away 986
Manchurian ponies on Quail Island, Port Lyttelton, before the expedition left for the Antarctic 976
Member of the expedition taking his bath... 983
Mount Erebus from the ice-foot..... 989
Music in the hut during the winter..... 982
One thousand feet below the active cone of Mount Erebus 994
Portaging the sledge over a patch of bare rock 1000
Remarkable fumarole in the old crater, in the form of a couchant lion..... 996
Sledging on the barrier before the return of the sun 1001
Skua gulls feeding near the hut at Cape Royds 997
Special motor wheels: The original form on the left, an Antarctic form on the right. 980
The four ponies out for exercise on the sea ice 977
The hut in the early winter..... 975
The "Nimrod" pushing through heavy pack ice on her way south..... 974
The pony "Quan" about to draw a sledge-load of stores from the ice-foot to the hut 978
View of the great ice barrier which extends from King Edward VII Land to Mount Erebus 973

SWEDEN:
Beau of Leksand in holiday attire..... 465
Carding, spinning, and weaving in a Swedish home 470
Delecarlia farming scene 471
Hanging the new-mown hay in racks to dry: Dalarne 475
In their Sunday attire: Delarne..... 469
Leksand bridal couple 466
Making flax in Delecarlia..... 477
Making lace in Delecarlia..... 466
Old and young citizens of Delecarlia..... 476
The Ornasstugan, old building in Dalarne... 472
Wasa monument at Rattwik..... 471
Rowing to church in Dalarne..... 474

THESSALY:
Barlaam and the Pindos range of mountains. 802
Barlaam Monastery, where women are not allowed 800
Monk ascending to monastery of Saint Barlaam in a rope bag..... 803
Trinity Monastery, where all visitors are drawn up in a rope net..... 804
View of the rocky formation and an abandoned monastery, Thessaly 805

UNITED STATES:
A few of the cave dwellings at Otowi, New Mexico 816
Alfalfa field ruined by mice in Humboldt county, Nevada 478

UNITED STATES (continued): Page
Alfalfa plant killed by mice..... 480
Among the wonderful tent rocks of Otowi, New Mexico 814
Arroyo with its surrounding bare clay hills in Carrizo Valley 695
Avalon Bay, South Catalina Island..... 762
Bad lands in the Colorado Desert..... 696
Bubble of lava on one of the great recent flows of eastern Oregon..... 656
City improvement projects, Seattle, Washington 660-663
Collapsed mud volcano, a caldera in miniature 692
Colorado Desert and Salton Sea after the inflow of the Colorado River..... 689
Completed section of the outfall sewer: Baltimore 369
Coyote Wells Valley and eastern front of Peninsula Range 694
Desert erosion east of Conchilla Valley, Colorado Desert 693
End of protective levee at the intake of the Imperial Canal system below Yuma..... 690
Fantastic and multicolored lava formation, Wheeler National Monument, Colorado.. 839
Gateway to Tacoma: Mount Rainier in the distance 654
Gorge cut by the new river at Calexico, 1906. 690
Group of quiescent mud volcanoes on the shores of Volcano Lake..... 698
Lumbardy poplar girdled and killed by field mice 481
Mouse which produced the plague in Nevada (*Microtus montanus*)..... 483
Mud volcanoes in action near Imperial Junction, California 699
Navawi, showing cave dwellings and steps cut in the solid rock: New Mexico..... 812
Olympic Mountains from Seattle, Washington 650
One of the five large pumping engines in sewage pumping stations: Baltimore..... 368
On the mesa approaching Tsankawi, New Mexico 808
Panorama in the Wheeler National Park, Colorado 838
Petroglyphs at Tsankawi, New Mexico..... 810
Pot-hold worn in granite boulder, Monterey Bay, California 488
Puye: Ancient stairway leading to ruins on the mesa above: New Mexico..... 818
Puye, New Mexico, showing a few of the prehistoric cave dwellings 820
Ruins of ancient pueblo on upper mesa of Tsankawi, New Mexico..... 811
Ruins of pueblo on top of mesa at Puye, New Mexico 819
Sand dunes that mark the eastern edge of Colorado Desert 700
Santa Clara Indian before the ruins of Puye, New Mexico 817
Second Avenue, Seattle, Washington..... 649
Seventeen palm springs, on the western border of Colorado Desert 686

UNITED STATES (continued): Page

Sewerage Commission on a tour of inspection through the sewer: Baltimore 370
Sheathing of a deep trench in Baltimore sewerage system 367
South side of Carrizo Mountain, in the Colorado Desert 697
The lake that disappeared: Near El Toro Indian Reservation 684
Upper end of Colorado Desert before the inflow of Colorado River 688
Using the brush drag to obliterate mouse holes 482
View along the edge of the upper mesa of Tsankawi, New Mexico 809
View in one of the great siphons of the Baltimore sewerage system 366
View of Otowi, New Mexico, showing strange tent rocks 815
View of Tacoma's harbor, Washington 655
Views of original boundary stones of District of Columbia 358-359
View of the outfall sewer, showing method of reinforcement: Baltimore 371
Views of the steep slopes: Wheeler National Park, Colorado 840
Water line that marks the shore of the lake that once occupied Colorado Desert 682
Yakima Indian, a large land owner on the Yakima Reservation 653

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